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DEPARTMENT OF DEFENSE AUTHORIZATION FOR APPROPRIATIONS FOR FISCAL YEAR 1987

HEARINGS

BEFORE THE

COMMITTEE ON ARMED SERVICES
UNITED STATES SENATE

NINETY-NINTH CONGRESS

SECOND SESSION

ON

S. 2199

TO AUTHORIZE APPROPRIATIONS FOR FISCAL YEAR 1987 FOR THE ARMED FORCES PROCUREMENT, FOR RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, FOR OPERATION AND MAINTENANCE, AND FOR WORKING CAPITAL FUNDS, TO PRESCRIBE PERSONNEL STRENGTHS FOR SUCH FISCAL YEAR FOR THE ARMED FORCES, AND FOR OTHER PURPOSES

PART 1

U.S. MILITARY POSTURE

Secretary of Defense Caspar Weinberger
Adm. William J. Crowe, Jr., Chairman, Joint Chiefs of Staff

FEBRUARY 5, 1986

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DEPARTMENT OF DEFENSE AUTHORIZATION FOR APPROPRIATIONS FOR FISCAL YEAR 1987

WEDNESDAY, FEBRUARY 5, 1986

U.S. SENATE,
COMMITTEE ON ARMED SERVICES,
Washington, DC.

U.S. MILITARY POSTURE

The committee met in open session, pursuant to notice, at 10:10 a.m., in room SR-253, Russell Senate Office Building, Senator Barry Goldwater (chairman) presiding.

Members present: Senators Goldwater, Thurmond, Warner, Humphrey, Cohen, Quayle, East, Wilson, Gramm, Nunn, Hart, Exon, Levin, Bingaman, Dixon, and Glenn.

Staff present: James F. McGovern, staff director and chief counsel; Arnold J. Punaro, staff director for the minority; Patrick A. Tucker, general counsel; and Toni D. White, special assistant; Robert G. Bell, Jonathan L. Etherton, Douglas R. Graham, John J. Hamre, Drew A. Harker, William E. Hoehn, Jr., George K. Johnson, Jr., Ronald P. Kelly, James R. Locher III, David S. Lyles, Ann Elise Sauer, Carl M. Smith, Judith A. Freedman, and Patricia L. Watson, professional staff members; Colleen M. Getz and Russell C. Miller, research assistants; Inga B. Schoonover and Richelle M. Turner, staff assistants.

Also present: Gerald J. Smith, assistant to Senator Goldwater; Romie L. Brownlee, assistant to Senator Warner; Robert P. Savitt, assistant to Senator Cohen; James M. Bodner, assistant to Senator Cohen; Henry D. Sokolski, assistant to Senator Quayle; John L. Roddy, assistant to Senator East; Mark J. Albrecht, assistant to Senator Wilson; Allan W. Cameron, assistant to Senator Denton; Deforest Hamilton, assistant to Senator Denton; Alan Ptak, assistant to Senator Gramm; Francis J. Sullivan, assistant to Senator Stennis; Mary A. Shields, assistant to Senator Stennis; Janne E. Nolan, assistant to Senator Hart; John B. Keeley, assistant to Senator Levin; Gregory B. Craig, assistant to Senator Kennedy; Edward McGaffigan, Jr., assistant to Senator Bingaman; Charles C. Smith, assistant to Senator Dixon; Phillip P. Upschulte, assistant to Senator Glenn; and Milton D. Beach, assistant to Senator Glenn.

[The bill S. 2199 follows:]

[S. 2199, 99th Cong., 2d Sess.]

A BILL To authorize appropriations for fiscal year 1987 for the Armed Forces for procurement, for research, development, test, and evaluation, for operation and maintenance, and for working capital funds, to prescribe personnel strengths for such fiscal year for the Armed Forces, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "Department of Defense Authorization Act, 1987".

TITLE I—PROCUREMENT

AUTHORIZATION OF APPROPRIATIONS, ARMY

SEC. 101. Funds are hereby authorized to be appropriated for fiscal year 1987 for procurement of aircraft, missiles, weapons, and tracked combat vehicles, and ammunition and for other procurement for the Army as follows:

For aircraft, $3,264,700,000.
For missiles, $2,438,200,000.
For weapons and tracked combat vehicles, $4,452,600,000.
For ammunition, $2,254,000,000.
For other procurement, $6,169,000,000.

AUTHORIZATION OF APPROPRIATIONS, NAVY AND MARINE CORPS

SEC. 102. (a) Funds are hereby authorized to be appropriated for fiscal year 1987 for procurement of aircraft, weapons (including missiles and torpedoes), shipbuilding and conversion, and other procurement for the Navy as follows:

For aircraft, $11,304,300,000.
For weapons (including missiles and torpedoes), $6,095,400,000.
For shipbuilding and conversion, $11,046,200,000.
For other procurement, $6,538,800,000.

(b) Funds are hereby authorized to be appropriated for fiscal year 1987 for procurement for the Marine Corps (including missiles, tracked combat vehicles, and other weapons) in the amount of $1,565,000,000.

AUTHORIZATION OF APPROPRIATIONS, AIR FORCE

SEC. 103. Funds are hereby authorized to be appropriated for fiscal year 1987 for procurement of aircraft and missiles and for other procurement for the Air Force as follows:

For aircraft, $19,127,400,000.
For missiles, $8,982,400,000.
For other procurement, $10,900,300,000.

AUTHORIZATION OF APPROPRIATIONS, DEFENSE AGENCIES

SEC. 104. Funds are hereby authorized to be appropriated for fiscal year 1987 for the Defense Agencies in the amount of $1,488,400,000.

AUTHORIZATION OF APPROPRIATIONS FOR CHEMICAL DEMILITARIZATION

SEC. 105. Funds are hereby authorized to be appropriated for fiscal year 1987 for the purposes of the destruction of lethal weapons in accordance with section 1412 of the Department of Defense Authorization Act, 1986, in the amount of $120,100,000.

CERTAIN AUTHORITY PROVIDED THE SECRETARY OF DEFENSE IN CONNECTION WITH THE NATO AIRBORNE WARNING AND CONTROL SYSTEM (AWACS) PROGRAM

SEC. 106. Effective on October 1, 1986, section 103(a) of the Department of Defense Authorization Act, 1982 (Public Law 97-86; 95 Stat. 1100) is amended by striking out "fiscal year 1986" both places it appears and inserting in lieu thereof "fiscal year 1987".

TITLE II—RESEARCH, DEVELOPMENT, TEST, AND EVALUATION

AUTHORIZATION OF APPROPRIATIONS

SEC. 201. (a) Funds are hereby authorized to be appropriated for fiscal year 1987 for the use of the Armed Forces for research, development, test, and evaluation, in amounts as follows:

For the Army, $5,550,300,000.
For the Navy (including the Marine Corps), $10,586,800,000.
For the Air Force, $17,275,400,000.
For the Defense Agencies, $8,517,400,000, of which $141,800,000 is authorized for the activities of the Deputy Under Secretary of Defense, Test and Evaluation and of which $11,300,000 is authorized for the Director, Operational Test and Evaluation.

(b) There are authorized to be appropriated for fiscal year 1987, in addition to the amounts authorized to be appropriated in subsection (a) such amounts as may be necessary for unbudgeted amounts for salary, pay, retirement, and other employee benefits authorized by law for civilian employees of the Department of Defense whose compensation is provided by funds authorized to be appropriated in subsection (a).

AUTHORIZATION OF APPROPRIATIONS FOR FOREIGN CURRENCY PURCHASES

SEC. 202. Funds are hereby authorized to be appropriated for fiscal year 1987 in the amount of $3,500,000 for the purchase of foreign currencies from the Treasury Department to pay expenses incurred in carrying out programs of the Department of Defense.

TITLE III—OPERATION AND MAINTENANCE

AUTHORIZATION OF APPROPRIATIONS

SEC. 301. (a) Funds are hereby authorized to be appropriated for fiscal year 1987 for the use of the Armed Forces of the United States and other activities and agencies of the Department of Defense for expenses, not otherwise provided for, for operation and maintenance, in amounts as follows:

For the Army, $21,341,870,000.
For the Navy, $25,688,500,000.
For the Marine Corps, $1,864,100,000.
For the Air Force, $21,214,500,000.
For the Defense Agencies, $8,573,700,000.
For the Army Reserve, $793,100,000.
For the Naval Reserve, $975,900,000.
For the Marine Corps Reserve, $65,300,000.
For the Air Force Reserve, $975,600,000.
For the Army National Guard, $1,786,900,000.
For the Air National Guard, $1,932,700,000.
For the National Board for the Promotion of Rifle Practice, $930,000.
For Defense Claims, $155,600,000.
For the Court of Military Appeals, $3,400,000.
For Environmental Restoration, Defense, $385,900,000.

(b) There are authorized to be appropriated for fiscal year 1987, in addition to the amounts authorized to be appropriated in subsection (a), such sums as may be necessary—

(1) for unbudgeted increases in fuel costs;

(2) for unbudgeted increases as the result of inflation in the cost of activities authorized by subsection (a); and

(3) for unbudgeted amounts for salary, pay, retirement, and other employee benefits authorized by law for civilian employees of the Department of Defense whose compensation is provided for by funds authorized to be appropriated in subsection (a).

AUTHORIZATION OF APPROPRIATIONS FOR WORKING CAPITAL FUNDS

SEC. 302. Funds are hereby authorized to be appropriated for fiscal year 1987 for the use of the Armed Forces of the United States and other activities and agencies of the Department of Defense for providing capital for working-capital funds, in amounts as follows:

For the Army Stock Fund, $296,700,000.

For the Navy Stock Fund, $478,500,000.
For the Marine Corps Stock Fund, $45,900,000.
For the Air Force Stock Fund, $239,400,000.
For the Defense Stock Fund, $136,800,000.

AUTHORIZATION OF APPROPRIATIONS FOR TENTH INTERNATIONAL PAN AMERICAN GAMES

SEC. 303. Funds are hereby authorized to be appropriated for fiscal year 1987 for assistance to the Tenth International Pan American Games in accordance with section 304 of the Department of Defense Authorization Act, 1986, in the amount of $15,000,000.

TITLE IV—ACTIVE FORCES

SEC. 401. The Armed Forces are authorized strengths for active duty personnel as of September 30, 1987, as follows:

(1) The Army, 780,900.
(2) The Navy, 592,700.
(3) The Marine Corps, 200,300.
(4) The Air Force, 607,200.

TITLE V—RESERVE FORCES

AUTHORIZATION OF END STRENGTHS FOR SELECTED RESERVE

SEC. 501. (a) For fiscal year 1987 the Selected Reserve of the Reserve components of the Armed Forces shall be programmed to attain end strengths of not less than the following:

(1) The Army National Guard of the United States, 462,800.
(2) The Army Reserve, 327,600.
(3) The Naval Reserve, 155,700.
(4) The Marine Corps Reserve, 44,400.
(5) The Air National Guard of the United States, 115,200.
(6) The Air Force Reserve, 80,500.
(7) The Coast Guard Reserve, 13,000.

(b) The end strengths prescribed by subsection (a) for the Selected Reserve of any Reserve component shall be proportionately reduced by (1) the total authorized strength of units organized to serve as units of the Selected Reserve of such component which are on active duty (other than for training) at the end of the fiscal year, and (2) the total number of individual members not in units organized to serve as units of the Selected Reserve of such component who are on active duty (other than for training or for unsatisfactory participation in training) without their consent at the end of the fiscal year.

AUTHORIZATION OF END STRENGTHS FOR RESERVES ON ACTIVE DUTY IN SUPPORT OF THE RESERVES

SEC. 502. (a) Within the end strengths prescribed in section 501, the reserve components of the Armed Forces are authorized, as of September 30, 1987, the following number of Reserves to be serving on full-time active duty or full-time duty, in the case of members of the National Guard, for the purpose of organizing, administering recruiting, instructing, or training the Reserve components:

(1) The Army National Guard of the United States, 28,721.
(2) The Army Reserve, 13,657.
(3) The Naval Reserve, 23,197.
(4) The Marine Corps Reserve, 1,782.
(5) The Air National Guard of the United States, 8,356.
(6) The Air Force Reserve, 676.

(b) Upon a determination by the Secretary of Defense that such action is in the national interest, the end strengths prescribed by subsection (a) may be increased by a total of not more than the number equal to 2 per centum of the total end strengths prescribed.

(c) Upon the exercise of the authority provided by section 673 or 673b of title 10, United States Code, Reserves covered by this section may perform duty in connection with section 673 or 673b and shall not be counted against the number of Reserves ordered to active duty under those sections. Appropriations available for the pay of Reserves covered by this section prior to the exercise of the authority provided by section 673 or 673b shall continue to be available for the pay of Reserves covered by this section.

SEC. 503. The first sentence of section 138(b)(1) of title 10, United States Code, is amended by striking out "average".

INCREASE IN NUMBER OF CERTAIN PERSONNEL AUTHORIZED TO BE ON ACTIVE DUTY IN SUPPORT OF THE RESERVE COMPONENTS

SEC. 502. (a) The table in section 517(b) of title 10, United States Code, is amended to appear as follows:

"Grade	Army	Navy	Air Force	Marine Corps
E-9	554	165	140	134
E-8	2,199	381	438	74".

(b) The table in section 524(a) of such title is amended to appear as follows:

"Grade	Army	Navy	Air Force	Marine Corps
Major or Lieutenant Commander	3,340	900	584	115
Lieutenant Colonel or Commander	1,681	520	415	75
Colonel or Navy Captain	439	188	207	35".

(b) The amendments made by subsections (a) and (b) shall take effect on October 1, 1986.

TITLE VI—CIVILIAN PERSONNEL

AUTHORIZATION OF END STRENGTH

SEC. 601. The provisions of section 138(c)(2) of title 10, United States Code, shall not apply with respect to fiscal year 1987 or with respect to the appropriation of funds for that year.

TITLE VII—MILITARY TRAINING STUDENT LOADS

AUTHORIZATION OF TRAINING STUDENT LOADS

SEC. 701. (a) For fiscal year 1987, the components of the Armed Forces are authorized average military training student loads as follows:

(1) The Army, 76,758.
(2) The Navy, 72,483.
(3) The Marine Corps, 19,433.
(4) The Air Force, 43,911.
(5) The Army National Guard of the United States, 18,262.
(6) The Army Reserve, 15,858.
(7) The Naval Reserve, 3,493.
(8) The Marine Corps Reserve, 3,944.
(9) The Air National Guard of the United States, 3,566.
(10) The Air Force Reserve, 2,127.

(b) The average military student loads for the Army, the Navy, the Marine Corps, and the Air Force and the Reserve components authorized in subsection (a) for fiscal year 1987 shall be adjusted consistent with the manpower strengths authorized in titles IV and V of this Act. Such adjustment shall be apportioned among the Army, the Navy, the Marine Corps, and the Air Force and the Reserve components in such manner as the Secretary of Defense shall prescribe.

TITLE VIII—GENERAL PROVISIONS

SPECIAL DEFENSE ACQUISITION FUND

SEC. 801. Section 138(g) of title 10, United States Code, is amended by striking out "$1,000,000,000 and inserting in lieu thereof "$1,100,000,000".

REIMBURSEMENTS UNDER THE CIVILIAN HEALTH AND MEDICAL PROGRAM OF THE UNIFORMED SERVICES

SEC. 802. (a) Section 1079(a)(7) of title 10, United States Code, is amended by striking out "pays for at least 75 percent of" and inserting in lieu thereof "provides primary coverage for".

(b) The amendments made by subsection (a) shall be effective as of October 1, 1985.

INDUSTRIAL FUND CAPITALIZATION PROGRAM

SEC. 803. Section 2208(j) of title 10, United States Code is repealed.

OPENING STATEMENT BY SENATOR BARRY GOLDWATER, CHAIRMAN

Chairman GOLDWATER. The committee will come to order.

Senator Nunn and I have been busy trying to defend our committee budget for the next year. So, I apologize for being late.

Senator NUNN. Our lean and efficient committee budget.

Chairman GOLDWATER. We have heard about Gramm-Rudman-Hollings and we have acted accordingly.

The committee meets this morning to receive testimony on the fiscal year 1987 defense budget from Secretary of Defense, Caspar Weinberger, and the Chairman of the Joint Chiefs of Staff, Adm. William Crowe.

This budget has, and will continue to be, the subject of much controversy. It is the first defense budget to be reviewed under the terms of the Gramm-Rudman-Hollings deficit reduction measure. Under that act, which, by the way, was approved in both the House and Senate by a nearly 2-to-1 margin, the Congress has clearly committed itself to reducing the Federal deficit.

Those who have come late to the controversy over the deficit may rightly ask, "How did we get in this mess in the first place? How did this Nation with such vast resources and such a vigorous economy get itself into a position in which we are routinely spending more money for Government services than we take in in the form of revenues?"

The answer is simple: We politicians, the elected representatives of the people, have been fiscally irresponsible. We have put tomorrow's prosperity at risk in order to ensure today's comfort. For politicians the motivation is clear—the more money you hand out, whether you have it to give away or not, the better your prospects for reelection.

The administration proposes the budget, but not a single dollar is spent that we in the Congress do not approve. That buck stops here.

At this point I would like to dispel what has become a popular myth: That is the idea that we have a deficit today because we have had large defense budgets. That is nonsense. While the dollar value of the defense budget has increased in real terms over the past two decades, it has actually decreased as a share of both the Federal budget and gross national product [GNP].

During those two decades, growth in the defense budget accounted for just less than 10 percent of the increase in Federal spending, while domestic programs and net interest payments accounted for the other 90 percent.

Comparing just domestic and defense expenditures during that period, the growth in domestic spending outpaced defense increases by a ratio of nearly 7 to 1. In practical terms, what that means is that for every dollar that was added to the deficit by growth in the defense budget, domestic spending increases accounted for an additional $7.

The truth is that today we face a serious Federal deficit not because of an ever-increasing defense budget, but rather because we have allowed domestic programs and entitlements to grow virtually unchecked for the past two decades. Anyone who argues that a tax increase is needed to pay for defense does not know what he is talking about. If a tax increase is necessary, it will be to pay for domestic programs, not defense.

These statistics are not intended to suggest that defense spending should be based on some accountant's formulas. It should not be. There is only one basis for determining defense requirements and that is the external threat to our national security.

Today the principal threat to our security and our way of life is, of course, the Soviet Union—a nation as committed to growth in its military capabilities as we are committed to reducing our Federal deficit. Under the leadership of Mikhail Gorbachev the Soviets are pursuing a new tack in their dealings with the West. The bullying tactics of previous Soviet leaders have been replaced by a smoother, more conciliatory approach. But let us not be lulled to sleep.

This new approach, you may be certain, is not the result of any fundamental change in Soviet objectives, but instead reflects Soviet recognition of the strength and determination of the West.

With respect to this, Mr. Secretary and Chairman of the Joint Chiefs and ladies and gentlemen, I have a book written by Arkady N. Shevchenko, "Breaking with Moscow." I find it to be very applicable to this point.

"Many still believe that" and he explains why American military power is an overwhelming preoccupation.

> It is not, however, a mirror image of the United States' fear of surprised nuclear attack or even vulnerability of such a threat. They abhor American armed strength for what it could do if properly and consistently directed to frustrate Soviet expansionism. Furthermore, they understand that it is the main, if not the only, barrier to their plans for world dominance.

Now, this is just a paragraph out of this book written by a man who was a former Soviet diplomat and I think bears very heavily and very wisely on the comments that are constantly made by the Secretary of Defense.

I will continue with my statement.

Finally, as we begin our review of this budget, I remind those who advocate major reductions in defense to remember two facts.

First, over the past 5 years we have worked hard in a bipartisan effort to overcome the deficiencies which plagued our defense posture during the post-Vietnam era. We are rebuilding both conventional and strategic forces, we are restoring adequate levels of readiness and sustainability, and, most importantly, we have restored the morale of our military personnel.

We are now in a position to reap the benefits of our investment and sacrifice. Cutbacks and programs stretchouts will squander those benefits and lead to loss of economies and reduced competition. We have been there before and we know the results. In the end we will pay more to get less.

Second, should the Congress decide that significant reductions must be made in the defense budget, then we must be prepared to reorder our defense priorities. We will have to reevaluate our national commitments, reassess the balance between strategic and conventional forces, and accept lower readiness levels. We cannot simply say, "Spend less on defense." We must make the hard choices and be prepared to face the consequences of our decisions.

This will be the last budget that I participate in as a Member of the Senate and as the chairman of this committee. Somehow I find it comforting as I look ahead to this year to know that it will not be an easy one.

On behalf of the entire committee, I extend a warm welcome to Secretary of Defense, Caspar Weinberger, who, to his credit, is one of the few left in the administration who is less concerned about telling people in Congress what they want to hear and more concerned about telling them what they need to hear about our national security requirements.

We also welcome Admiral Crowe.

I think you have done an outstanding job. You have taken our defense from practically nothing to where it is a good force again, a strong force, not strong enough. The morale of the troops has never been better. The quality of the troops, enlisted and officer, has never been better.

We also would like to welcome the new Chairman of the Joint Chiefs of Staff for whom all of us have the highest respect.

Secretary **WEINBERGER**. Thank you very much, Senator. I appreciate that very much.

Chairman **GOLDWATER**. Senator Nunn, do you have an opening statement?

Senator **NUNN**. Mr. Chairman, thank you very much for your opening statement. I think most of us share those very strong sentiments you expressed.

I want to welcome Secretary Weinberger and Admiral Crowe at the committee meeting this morning. As I compute it, this is Secretary Weinberger's sixth posture hearing. His 5 years so far as Secretary of Defense ranks him second only to Secretary McNamara in length of time he served the President and the country in this very important and very demanding job.

Mr. Secretary, as we welcome you this morning in what will be, I am sure, one of your most demanding and challenging years. I think it will be for all of us.

Admiral Crowe is well known to the committee. Although he has been in his current position a short time, we are very familiar with his service in previous positions which has been of great importance to the Navy and the overall operation of our forces. This is Admiral Crowe's first formal posture hearing.

Mr. Chairman, we welcome you this morning. Unfortunately, and Senator Goldwater has alluded to it, this will be the last Armed Services Committee posture hearing with the Secretary of

Defense and with the Chairman of the Joint Chiefs over which Senator Goldwater will preside. Fortunately, there will be many, many other hearings and many decisions between now and the end of your very great contribution to the service of the country in this capacity, Mr. Chairman.

This is a milestone today that all of us would rather not reach, but with all the battles we have forthcoming, you have a lot of challenges left in your career here in the Senate. I am sure wherever you are, you will continue to make major contributions to the security of the Nation, as you have your whole life, before you got into politics and since then.

We begin our oversight of the fiscal year 1987 Defense budget at a time of potential promise, but also at a time of great potential peril. This will be a year of promise if the President and the Congress succeed early on in agreeing to some overall long-term plan to reduce the Federal deficit. In my judgment, such an agreement will require us to play with the whole deck of cards on the spending side and on the revenue side of the ledger.

It will be a year of peril if we do not reach an agreement. If we go all the way to September with a game of chicken between the White House and the Congress, I think it could be a year of very significant peril.

We only have to look at the results of the current sequester of the 1986 fiscal year funds in the defense arena to realize that we only narrowly averted a train wreck in the early part of this year. That train wreck will occur without any doubt in October unless we take steps now to avoid it or unless there is a ruling by the Supreme Court which rules Gramm-Rudman-Hollings unconstitutional.

I say that as one who voted for the Gramm-Rudman-Hollings legislation. I think the forcing mechanism in this legislation as dangerous as it is, is necessary because continued fiscal inattention by both the White House and the Congress is even more dangerous.

Mr. Chairman, by my calculations this $13.8 billion sequester which will occur in the next 30 days of the fiscal year 1986 Defense budget authority has already put the fiscal year 1986 budget at a negative 6 percent real growth, 5 to 6 percent.

This is the largest real 1-year decline in defense spending since fiscal year 1971, and it is occurring now.

Fiscal year 1986 also marks the first year since fiscal year 1971 that the defense budget will be actually below the previous year's level in nominal terms. So, we have had a marked change. We do not have to wait until fiscal year 1987 to experience it. It is here now and it is taking place now.

Fiscal year 1985 is only a prelude of what could happen in fiscal 1987 if the automatic sequester is allowed to go into effect. Next October we could see reductions in the 1987 Defense budget of $50 to $75 billion in budget authority. That would be in budget authority, not outlays, and cuts of that magnitude could be very dangerous to our national security as well as to our aspirations in Geneva at the negotiating table.

The defense budget is going to bear its share of the burden in reducing the budget. The steady annual increases in defense spending in the past 5 years are a thing of the past. We are at a much higher base and that is fortunate.

A 1-percent increase now is approximately equal in purchasing power to what a 3-percent increase was 5 years ago because we have a much higher base from which to compute the increase. We are now, I think, at a stage where we will be very fortunate if we are able to protect the current buying power of the defense spending from inflation over the next 3 to 5 years. That is, if we can hold the base and not have it eroded by inflation.

To me that will be the best case that we could anticipate under an overall settlement between the Congress and the White House. I hope that is on the conservative side and I hope we can do better, but that is the way I see it now.

The 5-year plan before us today, as I understand it, will cause a real growth of 4 percent a year. That is approximately 4 percent above the best case. The worst case would be much, much lower than that.

One of the things that bothers me the most will also be a great challenge within the Defense Department. I understand you are presenting the needs as you see them for the country. I think that is proper, that is your role. That is the role of the Pentagon; we would not have it otherwise. But I have talked to a lot of corporate executives. I cannot find anyone who believes that they could run a corporation in America if their request and their budget planning each year for a period of years was significantly higher than they would likely receive because they all tell me it would so distort the planning process and the priority process within their own corporation that whatever level they had would be spent in a rather inefficient method because the priorities would be so obscured with the reductions taking place.

Mr. Secretary, I do not have an answer to that, but I do think that is a major challenge. I think that is a challenge to our military, too, because what is so apparent here is that we are having presented to us a 5-year defense plan which is not in tune with fiscal reality.

It may well be in tune with the threat and the need, but it is not in tune with what is going to happen under the best of circumstances, as I view them now.

In light of this harsh fiscal reality, there are a number of steps that I think we have to take to get the most capability for what our defense dollars will end up being. The emphasis has to shift. While we concern ourselves with input, it has to shift to output. We have to minimize major damage. We have to protect our national security in a period of fiscal crisis and that is what we are in.

We have to make sure that we do everything possible to get the very most we can out of the defense dollars that will be put in. I think we have to reexamine our military strategy. That is something that is beyond the reach of congressional decisionmaking, but certainly should be part of congressional debate. Our military leaders have to lead that examination in a very careful way. We all are busy working on defense reorganization. I think that appropriately has been made by Chairman Goldwater the top priority of our committee this year and it will, I hope, remain the top priority until we get the job done. That is enormously important and long overdue.

The Packard Commission has embarked on a major study of defense procurement. I am hopeful in the next 30 days they will have recommendations telling us how we can most effectively spend our defense dollars and how we can improve our procurement process.

I think without any doubt we have to reexamine our relationship with our allies around the world, not our defense commitments which we think are vital, but our relationships with the allies and the methods by which we carry those out and particularly the allied contribution.

That cannot be abrupt. It has to be done over a period of time, but the examination has to begin within the executive branch.

So, Mr. Chairman, these are a few of my thoughts that I think are going to set the stage for the most challenging year that we have had since I have been in the U.S. Senate. Only by the kind of bipartisan leadership, Mr. Chairman, that you have exerted so well as a member of this committee and particularly as chairman can we accomplish these goals.

I pledge to you that you will have the bipartisan cooperation from our side of the aisle in trying to maintain our national security in this period of unprecedented fiscal requirements.

Chairman GOLDWATER. Thank you very much, Senator.

I think we will ask both the Secretary and the Chairman to proceed, then we will get to questioning. I think that would be better.

Both of you gentlemen, I notice have prepared scripts. If you would like to submit those scripts for the record and proceed more or less on your own, you may do so. Do anything you care to do.

STATEMENT OF HON. CASPAR W. WEINBERGER, SECRETARY, DEPARTMENT OF DEFENSE

Secretary WEINBERGER. Thank you very much, Mr. Chairman, and Senator Nunn.

It is a great honor to be here. This is the sixth time I have appeared before the Congress to present the administration's request for the resources that we think are essential to ensure that the national security interests of the United States are protected.

I would be very remiss, Mr. Chairman, if I didn't start with an acknowledgment of not only the very fine good sense that we all expect and certainly, as clearly evidenced this morning in your opening statement, your recognition of the realities, not just the realities as to what will happen to the budget request, but the actual realities of the world in which we live.

So, you have carried out again, as you have for so many years in so many different forums in so many different ways, the leadership qualities and the real inspiration that you have been for so many people for such a long time.

It is a great honor to appear before you. I am sorry indeed, as you say, that this is your last time in this particular role with this committee.

I think it is vital to realize that we have made very great progress. Congress and the administration in the previous 5 years have shared the common goal of rebuilding these defenses and reestablishing the balance of military power that we need for secure deterrence.

The product of that shared commitment has been very impressive. Together the Congress and the President have restored the national pride and international respect for the United States that we have to have to carry out our role in the world.

The quality of the men and women in the military has never been higher. American forces around the world are ready to respond to any aggression. Because of that, we feel far freer from the risks of aggression.

We are succeeding in getting large quantities of weapons deployed to our forces, the most modern kind that will enable them to deal with the Soviet superiority in numbers. The political effect of the shared commitment, I think, is very evident, too, because our resolve to resist aggression is very evident, and our alliance partnerships are stronger. An unwilling Soviet Union has been forced back to the arms negotiating table that they said they would not return to, in the grudging realization that they will not be allowed to achieve military superiority over the United States and our allies.

The sequence of annual Soviet aggression against new targets that began in the midseventies with Angola and culminated in the brazen invasion of Afghanistan has ceased.

Working together, the President and Congress have come forward in reversing a decade of neglect and in upgrading our defense strategies and policy. These are the powerful and very direct results of American resolve and commitment to bear the cost that security requires.

The responsibility to sustain these results lies before us as a continuing requirement. It is obvious that the 1987 defense budget represents a critical phase, as you have said, Mr. Chairman, in the continuation of our shared goals and responsibilities.

Basically, the question is whether we are going to maintain that goal of rebuilding America's defense or whether we will fall back and see this effort falter because of economic problems that are magnified many times by the size of the deficit.

The administration remains committed to the sustained improvement of U.S. national security capabilities. That goal is threatened as Congress' commitment to the priority of national security seems to waiver. No one really that I have ever talked to, and certainly no one who has spoken thus far in this committee, has disputed the risks that we face today.

Soviet military capability grows unabated as it moves to confront the United States throughout the world. Risks to regional stability abound even here in our own hemisphere. While the strategic and conventional challenge to our security continues, terrorism and low-intensity conflicts have emerged as additional risks.

In the face of this situation some individuals maintain our defense efforts must now be relaxed. As you have pointed out, Mr. Chairman, if that is to happen, we will have to be told which commitment for the safety of the United States we have to give up.

The relaxation of those efforts and any reduction of our commitments is certainly not occurring because the risk is diminishing, because a modern and responsive capability is still as necessary as it ever was. It is asserted that the United States cannot afford an adequate defense.

I have never accepted this assertion, and the committee has not. I have never accepted the particular belief that American politics require that military preparedness must suffer in equal measure with dams and mass transportation projects in times of fiscal constraint.

Those who argue that we should forego a significant increase in safety, I think, should explain why. What is it that has happened that enables us to feel more relaxed about the Nation's requirements?

The questions each of us must ask are: Are we for any reason prepared to cut American strength in ways that increase the risk of war? Those who judge that in order to reduce the Federal deficit, the United States should underfund the programs previously agreed to by the President and the Congress and run higher risks, I think, should stand up and say so, but most of all say why they do.

Second, with arms reduction negotiations going on now, and with the second summit near, I think we should ask, is this the time to tie the President's arms behind his back rather than strengthening his hand?

I don't think we should make any mistake—the critical variable in the Soviet Union's willingness to negotiate seriously and to accept reasonable agreements is really their judgment of what we will do.

Who is prepared to take responsibility for undermining the Soviet Union's incentive to accept an agreement for real reductions in strategic nuclear arms? Or putting it another way, what is their incentive to agree to reductions if we do it for them here alone unilaterally?

I think we also should ask if America is not safer than we were 5 years ago. I wonder if anyone wants to go back to the United States-Soviet relationship of the late seventies? I think we should ask if American strength is not the price we have to pay for peace? Peace through strength is not a motto. It is a simple fact.

I know we are all preoccupied with deficits, and I understand the pressure confronting the Congress to reduce deficits by reducing Federal spending. That is a goal which I have supported in this and many capacities over the years.

Consequently, we have striven to take advantage of every opportunity to hold down defense costs, and I think defense has a very good record if anyone will look at it. Defense spending has been a contributor to previous deficit reduction exercises.

Since transmittal of the President's 1985 budget in 1984 our 5-year plan for authority and outlays has been reduced by $291 billion. With good management, the President's success at controlling inflation has enabled us to preserve force modernization despite the reductions. These sometimes have been the only reductions in spending in the whole budget proper.

There are those who seem to insist that the only acceptable evidence of defense participation in deficit reduction efforts is the cancellation of some needed programs. We have been a victim in the sense of our own success in keeping programs on track while making do with less.

There is also better planning which has been labeled as proof of waste and overbudgeting by those who would rather see the public's support of the President's strategic defense initiative fail. The defense budget has become the target of opportunistic demagoguery and our security, of course, has suffered.

Even prior to the Gramm-Rudman cuts, the fiscal year 1986 budget which was enacted represented a $24 billion reduction from the President's request. That is shown on the chart here. That is the figure where we came in in March 1981 as being what was required. We have made various reductions to that all through 1985, 4 years.

DOD TOPLINE REDUCTIONS

(BUDGET AUTHORITY in BILLIONS)

	1982	1983	1984	1985	1986	TOTAL 1982-1986
Amendment March, 1981	221.8	254.5	288.9	326.2	367.2	1,458.6
INCREMENTAL ADJUSTMENTS TO PLAN						
Sept 1981 through FY 1985 Enacted	-8.0	-15.0	-30.7	-39.4	-42.4	-135.5
FY 1986 Budget - Jan 1985	-	-	-	-	-11.1	-11.1
FY 1987 Budget - Jan 1986	-	-	-	-	-24.2	-24.2
PL 99-177	-	-	-	-	-11.0	-11.0
TOTAL ADJUSTMENTS since MARCH, 1981	**-8.0**	**-15.0**	**-30.7**	**-39.4**	**-88.8**	**-181.9**
Current TOPLINE	213.8	239.5	258.2	286.8	278.4	1,276.7
OUTLAY ADJUSTMENTS since MARCH, 1981	**-1.9**	**-16.1**	**-29.0**	**-51.9**	**-77.6**	**-176.5**

The budget of 1985 submitted by the President a year ago is $11 billion under that. The 1987 budget that was submitted in January 1986 was $24 billion under that. And the final Gramm-Rudman adjustment, taking another $11 billion out, brought us down to $88 billion reduction since March 1981 in that 1 year.

That is, of course, an attempt, first of all, to do all we could with less.

Second, it is a reflection of much reduced inflation.

And, third, it is a result of what we believe, and what we believe is correctly stated to be, improved management.

FY 1987 DEPARTMENT OF DEFENSE BUDGET
BUDGET AUTHORITY & OUTLAYS
(CURRENT $ BILLIONS)

	FY 1985	FY 1986	FY 1987
BUDGET AUTHORITY	286.8	289.4	311.6
PL 99-177	-	-11.0	-
NET B A	**286.8**	**278.4**	**311.6**
OUTLAYS	245.4	263.6	278.0
PL 99-177	-	-5.1	-3.8
NET OUTLAYS	**245.4**	**258.4**	**274.3**

Now, this year's budget request, and this is the familiar chart we have every year, shows that we are requesting in budget authority $311 billion. The 1986 budget appropriation was $313.7 billion. A reduction of $11 billion by Gramm-Rudman, after a $24 billion cut in appropriations, brought us to $278 which, as Senator Nunn said, is an actual reduction of 6.2 percent from 1985.

We are in outlays predicting that we will have had $263 billion out of fiscal 1986 appropriations. The $5 billion reduction that Gramm-Rudman made in outlays the first year brings us down to $258. This year our outlays prediction is $278 billion with a $3 billion reduction from Gramm-Rudman that continues on into 1987 as a result of the 1986 reduction and which brings us down to $274.

This reduction between 1986 and 1985 is the first time there has been an absolute decline below the previous year in 15 years. I have not yet been shown nor have I seen, anyone who is able to state, what reduction in the risks we faced last year has justified this 6-percent cut.

Nonetheless, we are keeping faith with the 0–3–3 percent real growth budget plan which the Congress and the President negotiated and which the 1986 budget resolution specified for national defense.

In previous years we have always conformed our request to congressional agreement. We did so this year. Our request this year is consistent with that. It is 3 percent real growth above what would have been zero this year, which we were promised and the Congress agreed on last August.

Our defense top line stated in the August resolution, Mr. Chairman, was $314 billion. We have come in $3 billion less than that at $311 billion.

The size of our budget, of course, must be considered in the context of the total fiscal picture. We simply cannot use, however, top line real growth rate as a yardstick for the defense budget.

As the Chairman said, we do not have to spend a particular amount of real growth, but we have to fund real programs to meet real risks. That is what we are doing.

The proper level of defense resources cannot hinge on some sort of snapshot calculation of real growth based on rapidly changing and arbitrary economic assumptions. We are guessing now, and that is the budget process, about what things will be like in 18 to 22 months.

Congress must look carefully at the programs being purchased. It must assess the priority of defense programs as an element of Federal spending and the priorities of the programs within the defense budget. That is the way we have developed our budget.

Unfortunately, there has been an increasing tendency by some to refuse to address defense priorities and only deal with the defense topline. I think this approach makes a travesty of both the administration's effort to develop a budget that conforms to the latest available congressional direction, and of congressional efforts to review and adjust its own priorities.

Your committee last year spent many months in enacting a bill that reduced the President's 1986 defense request by $19 billion. It was difficult work. It conformed with the budget resolution. It brought us in at precisely zero real growth and reflected congressional priorities for a budget of that size.

After that month's work the Congress simply decided it did not want a budget that size, but one $5 billion lower. They enacted that in the continuing resolution, and the Gramm-Rudman legislation required another $11 billion reduction.

The work you did was undercut by $16 billion from the authorization bill and the Congress did not provide, therefore, even that zero real growth, but instead a 6.2-percent decline.

Our defense posture requires a stronger commitment from Congress than that. It requires a commitment to return to a solid and consistent budget plan for national security resources. The Congress has to decide whether we are going to budget for what we need in defense or whether we are going to squander past gains and return to the practice of regarding defense spending as the balance wheel of fiscal policy.

That is the practice that gave us the hollow forces in the seventies and required so much effort for us to catch up in the eighties.

Our new investment programs this year represent little more than the one-tenth of total defense spending planned for fiscal year 1987. Therefore, imposed reductions will threaten readiness efforts, pay and end strengths, and existing prior-year contracts. Of course, if the Gramm-Rudman trigger is pulled, every one of our 3,250 accounts will have to be reduced proportionately, allowance for priorities and no consideration of what is more important or what is less important.

I do not think the Department of Defense or anyone else can provide a rational or efficient modernization program that way.

Senator Nunn said we should budget to what we are likely to receive in keeping with corporate action. I have had a little corporate experience. What you are likely to receive is something that you are able to estimate. It is not something you are able to estimate when your board of directors consist of 535 people, many of whom have a goal of reduction in the defense budget, no matter what figure is submitted.

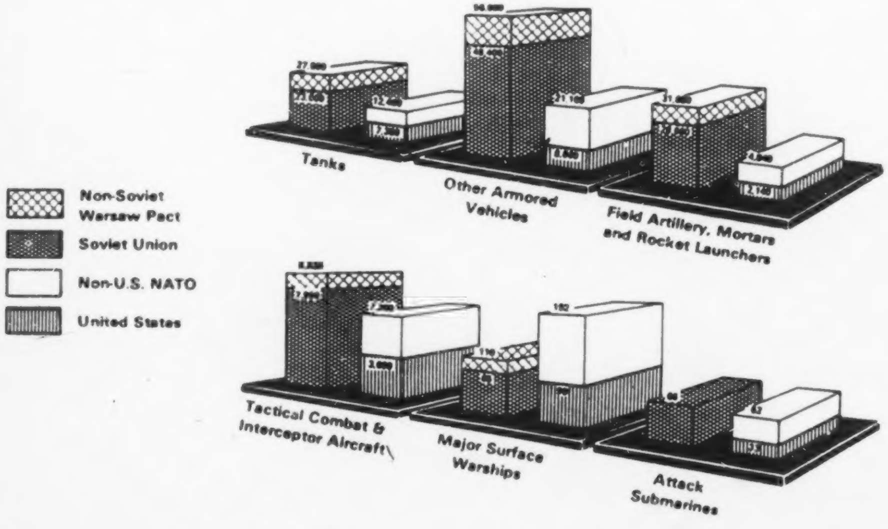
That is what makes budgeting difficult. That is what makes the stability that is required to get the best prices almost impossible to obtain.

We are presenting a sound defense budget for 1987, perfectly consistent with the Congress' own budget plan of a few months ago—$3 billion less than that plan, and this budget builds on the results of the resources that Congress has very generously provided for defense in the past. It continues the initiatives of the past 4 years.

The objective is to complete and sustain the effort and improvements already realized. So, I urge the Congress to get the defense debate back on track by considering our budget request in terms of the priorities on which it is built and instead of telling everyone the budget cannot be passed, that it is unrealistic, that it has to be cut because everything else has to be cut. I think we should consider, as the Chairman said, the risks we face and the reason for the defense budget in the first place. It is simply an insurance policy against continuing and increasing risk.

Developing our defense program and the budget begins with an assessment of our current and projected risks, and we cannot say that the Soviet military capability has done anything but go up. Their modernization program which was started many, many years ago—many years sooner than ours—has been going on now for 23 years, has continued at a much faster pace and continues unabated.

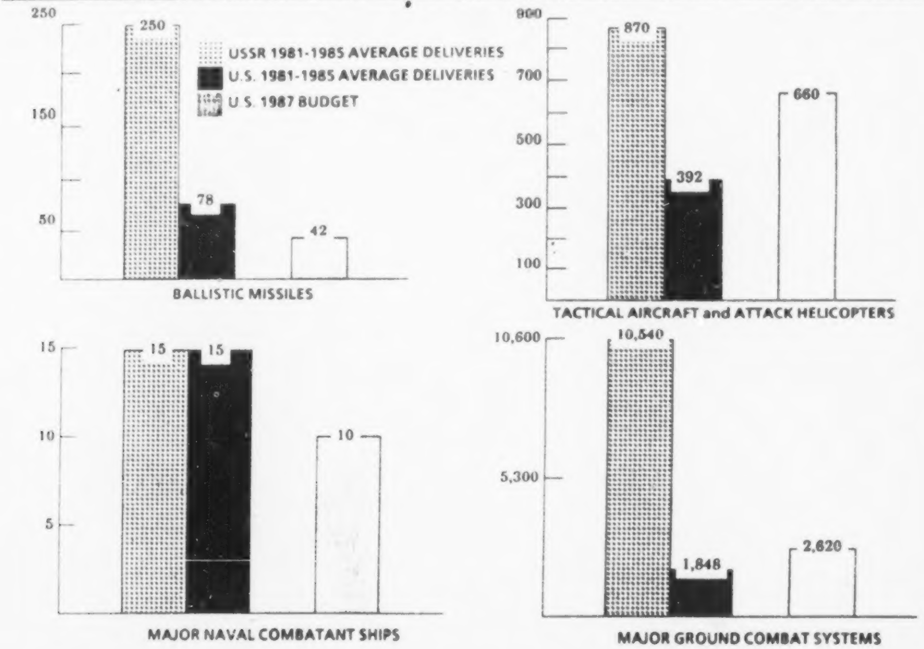
PRODUCTION OF SELECTED WEAPONS for NATO and WARSAW PACT FORCES
(1975 - 1987)



We will see here, Mr. Chairman and members of the committee, the production, the output, which is really the only relevant thing in all these discussions of numbers and percentages. The question is, what do you get for it? This is what the Soviet Union and Warsaw Pact get compared to what NATO and the United States get.

You will see the totals there. You will see the production over the decade and a bit more, 11 years. You will see in each case except for major surface warships the Soviets have outproduced us and have already deployed a great many more conventional weapons systems than we have.

COMPARISON of 1981-1985 EQUIPMENT DELIVERED with FY 1987 BUDGET



Here is the comparsion of this with the equipment that would be delivered with our 1987 budget. You will see there that the average 1981–1985 deliveries of ours are in dark blue. This year's budget is in light blue.

The Soviets, again, are far ahead in every category except major naval combatant ships. This, again, is an indication of the fact that while we have a large budget this year—but a budget that is completely realistic and states our needs—it is a budget which does not close significantly many of the gaps that have built up over a 10- to 15-year period when the Soviets not only outspent us, but much more important, outproduced us. They did that because our priorities were elsewhere.

It also demonstrates that we are not trying to catch up tank for tank. It demonstrates that what we are trying to do is to acquire and maintain a degree of deterrent strength which is essential to maintain the peace.

Senator NUNN. Can you furnish us a comparison of the spending of NATO and Warsaw Pact during the same 11 years, because

NATO has outspent the Warsaw Pact collectively for each one of these years, acccording to my recollection.

Secretary WEINBERGER. We will furnish the data, but you have to bear in mind that the data on Soviet and Warsaw Pact spending, as we used to say at OMB, is extremely soft. That is because they can report things which are not factually correct or complete.

For example, the Soviet defense budget has been publicly reported to be 26 billion rubles for the last 7 years, which is a remarkable achievement. Yet they are able to do that year after year.

The fact is that they have all kinds of separate pots in which they hide money and various other ways of concealing the actual fact. We will give what figures we have.

The important thing is the output, and this is the output.

Senator NUNN. I agree with that.

[The information follows:]

Secretary WEINBERGER. As you are aware, developing national defense expenditure data which is comparable is a difficult task heavily dependent on assumptions and methodology. This problem is made more difficult when dealing with closed societies such as the Warsaw Pact where their published defense expenditures are not at all tied to reality. (For example, the Soviet Union publicly claims they spend only about 19 billion rubles on its forces annually. This equates to approximately $25 billion.)

The method for developing Warsaw Pact defense costs expressed in US dollars used to develop the table below was to take our estimates of all components of Warsaw Pact military programs and estimate what these programs would cost using US prices and cost factors.

The method used to provide comparable data for NATO for the table below involved calculating non-US NATO costs by converting actual NATO non-personnel defense outlays (in constant prices) to US dollars, using purchasing power parities; and by multiplying NATO military personnel strengths by a US military compensation factor. Comparable US figures are then added to this amount.

COMPARATIVE DOLLAR COSTS OF TOTAL MILITARY PROGRAMS

[U.S. billions of dollars, 1984 prices, rounded to nearest $5 B]

	NATO	Warsaw Pact
1976, 1977, 1978, 1979, 1980, 1981, 1982, 1983	[Deleted.]	

Note: Figures include France but not Spain.

The values shown above for NATO are for comparison only. First, they do not reflect what NATO nations actually spent on defense nor do they reflect the cost of the military to their economies. Second, the Warsaw Pact figures represent or are estimated from an intelligence estimate of what it would cost in dollars to replicate their forces in the US while the NATO figures represent reported outlays. For a more detailed description of Allied expenditures I recommend the DOD Report to Congress on Allied Contributions to the Common Defense.

[Deleted.]

Secretary WEINBERGER. Our security strategy is simply to build the strongest possible deterrence we can to protect our interests and those of our allies in order to prevent war.

We seek to accomplish this by convincing potential enemies and adversaries that the cost of attack would far exceed any gain they would even hope to achieve. We cannot do it alone. We have to have alliances. NATO continues to maintain a credible capability to repeal a Warsaw Pact attack, but we also have a requirement for reinforcement in Asia.

The military balance favors the Soviets, but with our current modernization programs, the long-term trend favors us. The ability to project our power still favors us, but we must continue to monitor carefully Soviet programs which are enhancing daily their force projection capability.

The Soviets have achieved an overall quantitative advantage in conventional weaponry. The quality of their weaponry has improved significantly. We used to take a lot of comfort in the fact that, while they had a lot of weapons, they weren't much good.

They purchased a great deal of our technology; they have stolen more of it. As a result, the quality of their weapons has improved. The Warsaw Pact allies have created a military force that far exceeds one necessary to defend their territory. This is offensive military strength that is being acquired. There is not the slightest indication that any reduction in our commitment to improve our military forces would result in any corresponding reduction by the Soviets.

The risk and threat to us does not go down as our deficit increases. The evidence of all of the past is entirely to the contrary. If we were to devote the same percentage of our GNP to the military as the Soviets do, we would not be submitting a fiscal year 1987 defense budget of $311 billion. We would be submitting a budget of $700 billion.

Our 1987 program is designed to do what we have to do and that is to sustain the long-term program for rebuilding strength that is adequate for a secure deterrence. Peace may seem expensive, but I suggest we consider the alternative. By scrimping on our strength, we can reduce our security and increase the risk of war.

If we fail to keep the peace, the cost to our standard of living, indeed to our lives and our country, is absolutely incalculable.

The 1987 program is intended specifically to address risks that confront us now and do it within fiscal restraints established by the Congress last year. Our budget reflects an evaluation and revalidation of our force requirements. It continues the same modernization programs which the Congress has approved over the last 4 years.

The only changes are further efforts to get greater procurement economy and efficiency and to achieve the goals we have to reach in the most expeditious and economic manner.

With respect to our personnel, Mr. Chairman and members of the committee, this is our happiest story. I think no turn around has been more remarkable than the improvement in the personnel quality and retention throughout all components of the services.

FY 1987 DEPARTMENT OF DEFENSE BUDGET

MANPOWER

(IN THOUSANDS)

	FY 1985	FY 1986	FY1987	Change FY 86-87
MILITARY ACTIVE DUTY				
ARMY	781	781	781	-
NAVY	571	581	593	+ 12
MARINE CORPS	198	199	200	+ 1
AIR FORCE	602	606	607	+ 1
TOTAL MILITARY [1]	2,151	2,167	2,181	+ 14
RESERVE MANPOWER				
SELECTED RESERVES	1,088	1,134	1,186	+ 52
CIVILIAN MANPOWER				
TOTAL CIVILIAN [2]	1,129	1,110	1,114	+ 4

Note: 1 Includes Military assigned to Defense Agencies and Cadets.

2 Civilian End Strength includes Classified, Wage Board, Foreign Indirect, Civilian Technicians, and Permanent Part-time.

The 1987 budget requested $77 billion for personnel costs. Of this amount, $67 billion supports the active duty forces. We are asking an increase in these. We feel we have to have a total increase of 13,730, primarily in the Navy because as the new ships we are building come on line obviously we need the people to operate them.

The Navy goes from 553 ships to 566. That eliminates about seven ships that the Navy felt strongly they wanted, but we had to tell them they couldn't have them because of fiscal constraints.

The increased fleet end strength will provide for the manning of the new ships and squadrons and other direct fleet support requirements.

We are asking for a 1,500 increase in the end strength of the Marine Corps and that is to support continuing fleet and Marine Force improvements and to convert some squadrons to AV-8B's and F-18's. It also involves the activation of a ship detachment for the *Wisconsin* which is coming on line.

PERCENT OF RECRUITS WITH HIGH SCHOOL DIPLOMAS

Service	1980	1981	1982	1983	1984	1985
Army	54	80	86	88	91	91
Navy	75	76	79	91	93	89
Marine Corps	78	80	85	92	95	97
Air Force	83	88	94	98	99	99
Total	68	81	86	91	93	93

PERCENT OF FIRST TERM REENLISTMENTS

Army	50.6	55.0	58.6	45.3	43.8	43.1
Navy	36.7	41.7	50.3	55.7	58.0	54.5
Marine Corps	23.2	26.6	34.0	33.3	39.5	35.4
Air Force	35.8	42.9	56.9	65.8	61.9	53.9
Total	39.1	43.0	52.9	51.6	51.2	47.8

The recruitment and retention are some of our very happiest stories. We have here not only the table showing quality increases, we are up to 93 percent high school diplomas in all services; the Air Force is 99 percent.

This is a function of the fact we have more people applying than we can take from the waiting line. That enables us to choose the very best in quality measured by educational achievements.

The reenlistment rate is also extremely encouraging, although there is now for the first time a figure which causes us to watch it very carefully. The first-term reenlistment in 1985 started to drop a bit in each of the services. Part of that is attributable to the fact that there are greater employment opportunities available, but I think a part of it, Mr. Chairman, I have to say, is attributable to growing worry about possible turbulence in the defense budget and in the treatment of personnel in the future.

So, we have to worry about that. To counter that, our 1987 budget continues our support for adequate compensation, so we can try to keep our promise to keep compensation up with the inflation.

Although the budget restraints have kept military pay raises at quite modest levels in the last few years, after very generous action by Congress a few years ago, the administration remains committed to pay comparability. We strive to keep an overall military compensation program that will compete with other employment alternatives.

Our budget request is for a 4-percent military pay raise effective October 1. That is comparable to anticipated private sector wage increases, and it will prevent further widening of the pay comparability gap which is currently estimated to be 8.3 percent. We believe that military pay is 8.3 percent below whatever comparable civilian pay estimates our people can make.

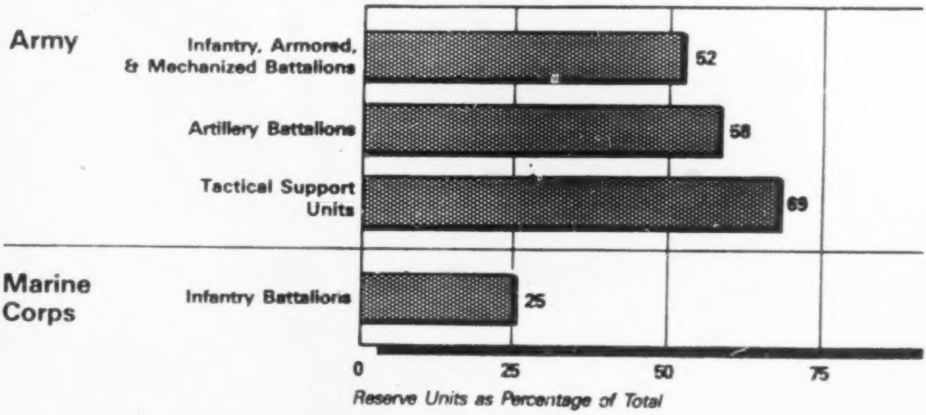
With retired pay we have a very serious problem. The 1986 authorization bill directed us to submit legislation to achieve a $2.9 billion saving by changing the military retirement system. The 1986 appropriation bill deleted $2.9 billion from our budget provided that it could come back by transfer from prior year balances to cover any higher cost that we would incur until the Congress enacts a retirement change.

But that act, Mr. Chairman—and I do not think this is very widely appreciated, that appropriation act gives us only temporary relief because it requires after May 1, 1986, that we must revert to the obligation limits imposed by the authorization act.

Legislation to change the retirement system and to lift the obligation caps was submitted, as required of us, and is currently being considered by the Congress.

Mr. Chairman, if that retirement reform or some relief from the obligation cap is not voted by May 1, we will have to reduce military personnel by over 330,000 Active and 176,000 Reserve people by the end of the fiscal year. That is a very, very large reduction of a force that is already basically too small for our needs.

PROJECTED CONTRIBUTION of RESERVE COMPONENTS
(END OF FY 1987)



ANNUAL CHANGE IN GUARD AND RESERVE FUNDING
(Less Congressional Adds - $ in Millions)

FY 1982	FY 1983	FY 1984	FY 1985	FY 1986	FY 1987
+ 420	+ 1,534	+ 2,177	+ 3,594	+ 1,860	+ 740

We have another, I think, important and positive role to report with respect to Reserves. The Reserve components that we will rely on quite heavily, both for the Army and the Marine Corps, as a percentage of the total, is shown here.

We have had substantial increases in the Guard and Reserve funding because it is part of our total force, and many have told us that it is a more economical way to provide the manpower we need. We agree with that and are relying on it. They will make a very significant contribution, the Reserves and the Guard.

We include $19 billion in support of these components. This includes an increase in the Reserves of about 52,000 end strength and it allows the Reserves to reach a goal of 90 percent trained in unit strength. It will support 105 unit activations. It is the highest of all of the Reserve totals for many, many years.

They will also get very modern equipment, including the M1 tank and Bradley fighting vehicles, Apache and Blackhawk helicopters.

The Naval Reserve Force continues to increase.

The civilian personnel have also shown an increase to provide for a wide range of programs and activities and, I have to say, Mr. Chairman, to help us deal with a wide range of reports.

This is a list not of the reports themselves, but a list of all of the 676 new reports which Congress required in last year's appropriations bill alone, 676 new reports. These are just pages that list report after report we must turn in.

You will excuse us if we may be late for one or two of these this year. We do have to have additional personnel to deal with that kind of additional requirement.

We request a 3-percent pay raise for the civilian work force, which is below inflation, but which we think is basically fair.

Major Equipment Procured for Guard/Reserve

	FY 1985	FY 1986	FY 1987
Army			
AH-64 Attack Helicopters	18	18	-
UH-60 Blackhawk Helicopters	2	15	32
Bradley Fighting Vehicles	174	32	-
M-1 Abrams Tanks	180	60	120
High Mobility Multipurpose Wheeled Vehicles (HMMWV)	1,572	5,872	2,476
Navy			
UH-60 Blackhawk Helicopters	2	4	-
KC-130T Tanker Aircraft	2	2	-
MK-15 Close In Weapon System (PHALANX)	4	6	1
M-198 Towed Howitzers	-	50	36
High Mobility Multipurpose Wheeled Vehicles (HMMWV)	643	1,719	-
Air Force			
C-130H Aircraft	16	16	-
F-16 Aircraft	30	-	-
Fuel Tank Trucks	50	45	57
Flightline Tow Tractors	115	41	77
Fire/Crash Trucks	84	69	102

On modernization, we will continue to provide for Guard and Reserve a number of extremely and useful and necessary brand new weapons. They are getting them not in the same numbers that the active force is, but they are getting them in much larger numbers than has been the case in the past.

Now, with the respect to our modernization and our strategic forces, we have funds requested to purchase 21 MX test missiles.

These are for tests only. In keeping with recent congressional limitation, we will place only 50 MX missiles in the existing Minuteman silos.

We are asking for research funds to report to the Congress a better basing mode so that the necessary second 50 of the MX missiles can be deployed.

We are also planning to begin full-scale development of the new small single-head missile, which has been directed by the Congress in previous years.

We have an additional Trident nuclear submarine and initial production of the first 21 of the new D-5 Trident missiles. This is the first submarine-launched missile which will have the payload and accuracy needed to retaliate effectively against the Soviet-hardened targets.

Our reseach and development funding is requested for the continued development of the advanced technology bomber and two new bomber-delivered weapons—the advanced cruise missile and short-range attack missile.

Mr. Chairman, we are not requesting any funds for further procurement of the B-1B. That program is completed, below budget, and we will be ahead of schedule. It remains a model of how efficient defense acquisition programs can be if they are executed as planned.

We continue to place an emphasis on maintaining modern forces that are properly equipped, supported, and carefully balanced between Active and Reserve components. We are making substantial gains in our modernization of all of the services

These charts are in response to some of the questions about what we have obtained for the dollars that have been appropriated in the past few years.

ARMY MODERNIZATION

	On Hand		FY 1986 & Prior Auth/Approp & soon to be delivered	
	FY 1980	FY 1985		FY 1987
Close Combat				
M-1 Tanks	34	3,021	1,956	840
Bradley Fighting Vehicles	-	1,936	1,735	870
Helicopters				
AH-64 Apache	-	45	408	144
UH-60 Blackhawk	-	684	93	78
Air Defense Missiles				
Patriot	-	612	1,563	700
Stinger	-	6,554	8,005	4,180
Artillery				
MLRS	-	204	144	44

On the left, the far first column, those are items on hand in 1980 when we came.

The next column is what is on hand right now.

The next column is what you have already authorized and appropriated for. They are in the pipeline and will soon be delivered.

The last column is the amount that we request to continue this momentum in fiscal year 1987. These are the Army weapons.

The next chart shows Navy and Marine Corps modernization. It shows the additional ships, aircraft, and missiles that are coming on line and also that are on order as well as requested in this year's budget.

NAVY/MARINE CORPS MODERNIZATION

	On Hand		FY 1986 & Prior Auth/Approp & soon to be delivered	FY 1987
	FY 1980	FY 1985		
Tactical Aircraft				
F-14A	322	430	54	15
F/A-18	-	234	252	120
AV-8B	-	32	105	42
P-3C	176	229	21	9
Ships				
SSN-688 Submarine	10	28	24	4
AEGIS Ships	-	3	17	5
Frigates	71	112	5	-
Battleship Reactivation	-	2	2	-
Trident Submarine	-	6	7	1
Strategic Missiles				
TRIDENT I	144	518	52	-
TRIDENT II	-	-	-	21
Tactical Missiles				
Sidewinder	4,510	5,899	1,823	627
Sparrow	2,236	2,753	2,932	1,716

The last chart shows the same for the Air Force with the addition of 48 F-15's, 216 F-16's and so on.

AIR FORCE MODERNIZATION

	On Hand FY 1980	On Hand FY 1985	FY 1986 & Prior Auth/Approp & soon to be delivered	FY 1987
Tactical Fighters				
F-15	507	728	105	48
F-16	157	838	398	216
Strategic Aircraft				
B-1B	-	2	100	-
Mobility Aircraft				
KC-10	-	35	57	8
C-5B	-	-	29	21
Strategic Missiles				
PEACEKEEPER	-	-	54	21
ALCM-B	12	1,472	267	-
Nuclear/Tactical Missiles				
GLCM	-	196	288	76
Sparrow	8,192	10,302	1,965	379
Sidewinder	11,617	16,753	3,581	1,710

Some have asked why it is that the services didn't get what they wanted, I guess I would have to say more of all of the above.

In our budget scrubs we did have to make major reductions in all of those requests. We did it on a very firm basis with the idea that we have fiscal contraints that, from our point of view and from the point of the administration, overrode the actual total need.

SPECIAL OPERATIONS EXPANSION

	FY 1981	FY 1987
Total Funding ($ millions)	$441	$1,693
MC-130 Aircraft	0	5
Special Forces Groups (includes four Reserve Components)	7	8
Ranger Battalions	2	3
Psychological Operations Battalions	3	4
SEAL Teams	2	5 1/
SEAL Delivery Vehicle (SDV) Teams	0	2 1/
Seafox (Special Warfare Craft, Light)	8	36

1/ Includes two Underwater Demolitions Teams redesignated in 1983.

With respect to our special operations forces, we continue to place very great emphasis on these. This is a chart that shows the expansion of the special operations forces, which are under joint leadership. These increases are unfortunately necessary, considering the kinds of threats that we face in the world.

MAJOR FY1987 RDT&E PROGRAMS

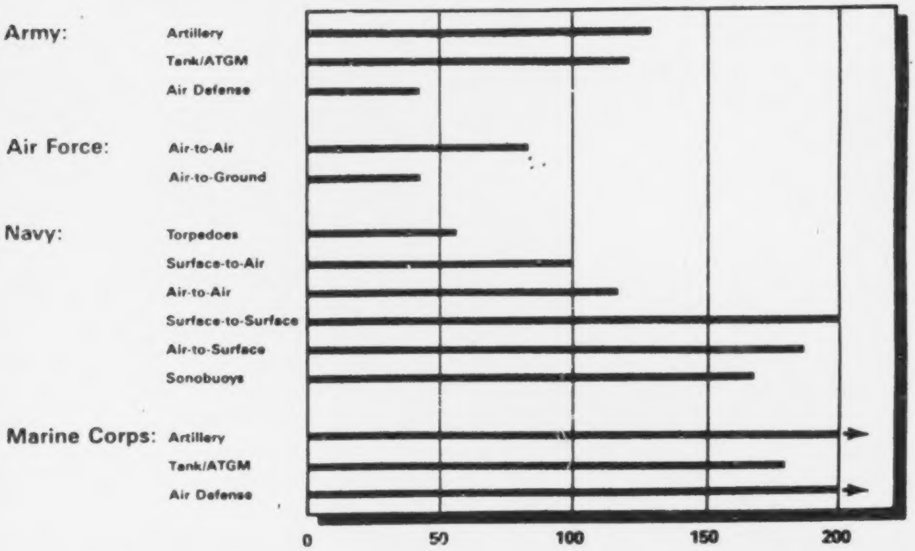
($ in Millions)

	FY 1986	FY 1987
Strategic Defense Initiative	2,746	4,785
LHX Helicopter & Engine	114	155
DIVAD Alternatives	31	104
V-22 (JVX) Tilt Rotor Aircraft	555	387
SSN-21 Attack Submarine/SUBACS	576	670
Advanced Tactical Fighter	165	294
Small ICBM (Incl. Basing)	746	1,396
PEACEKEEPER (Incl. Basing)	696	721

On research and development we have pursued and are pursuing the President's highest priority, which is the strategic defense initiative.

We are developing a new lightweight helicopter, LHX. We are examining now all of the various alternate ways to get effective division air defense to replace the canceled Divad Program.

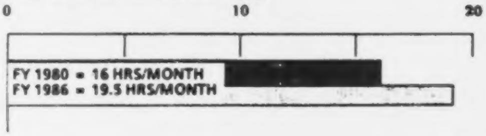
IMPROVEMENTS IN MUNITIONS SUSTAINABILITY
(PERCENT INCREASE OVER FY 1981 POSTURE)



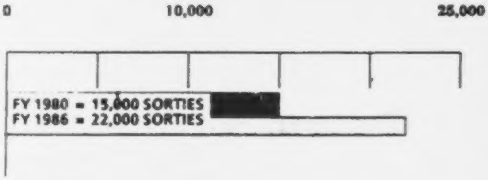
On readiness and sustainability we have made major improvements. These are the percentage increases over the 1981 posture. These are very large expenses. These also would be some of the first things to go because they do not have a particularly large constituency. They are an absolutely vital part of readiness and sustainability.

TRAINING IMPROVEMENTS

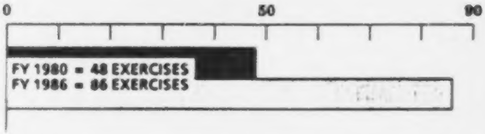
Air Force Tactical Aircrews:
19.5 flying hours/month



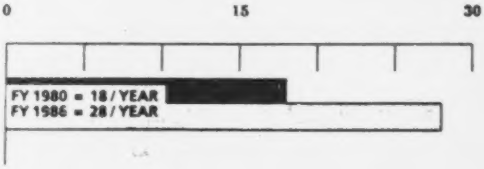
Air Force Tactical Aircrews:
22,000 Red Flag exercise sorties



Increased JCS Exercises:
86 Exercises



Army Battalions:
28 battalions/year rotating through National Training Center



We have made a number of improvements in training levels. These again are important expenditures, because they are vital for readiness and sustainability. This chart shows increases in flying hours and JCS exercises and the number of battalions we have been able to put through the new National Training Center at Fort Irwin.

ACQUISITION IMPROVEMENTS

- **Cost Growth for Major Weapon Systems:**
  - end of CY 1980 14%
  - end of CY 1983/CY 1984 1%
- **Multiyear Procurements:**
  - FY 1982 - FY 1986:
    - 40 multiyear contracts approved/$6.2 billion in projected savings
  - FY 1987 budget:
    - 7 multiyear programs requested/$2.1 billion in anticipated savings
- **Increased Use of Competitive Contracts:**
  - 72% of all FY 1985 contracts competitively awarded (40% in FY 1981)
- **Spare Parts Acquisition Initiatives:** Savings of $2.5 billion
- **Economic Production Rates:** Savings of $2.7 billion

Finally, I would like to call your attention to savings we have been able to make by acquisition improvements. This chart represents the one for which I have the greatest pride because it shows at the top that the average annual cost growth at the end of calendar year 1980 was 14 percent for all of our 84 major weapons systems. It had been as high as 17 percent in the years before that. For the last two fiscal years and as far as we can tell from this year, that cost growth will be less than 1 percent. We think that has been accomplished by increased use of competitive contacts.

We are now up to 72 percent of all our contracts competitively awarded. Improvements in acquisition of spare parts have saved $2.5 billion and using the most economic rate of production has saved $2.7 billion.

There is another savings of $6.2 billion by multiyear procurement, which you authorized in 1981. In 1987 we have seven multiyear programs and they will save $2.1 billion. All of these I think are major improvements.

I would mention again the B-1 and the M-1 tank as two notable successes in the way in which we can use all of these things to secure greater quantities sooner and at less cost. We have improved our whole procurement and acquisition process. It has been a high priority.

We have added a number of people who have highly increased use of private competition. We have also had a very large increase in the number of audits. We have identified some 50,000 items, 54,000 items, that we now break out for open competition and subcontracts.

DOD EFFORTS TO CURB WASTE, FRAUD and ABUSE - FY 1985

CONTRACT AUDITS:	
• **ESTIMATED SAVINGS**	**$8.1 billion**
INTERNAL AUDIT of DOD ACTIVITIES:	
• **ESTIMATED SAVINGS**	**$2.7 billion**
INVESTIGATIVE ACTIVITIES:	
• **RECOVERIES, RESTITUTIONS, and FINES/PENALTIES**	**$125.9 million**

We pursue these management improvements wherever we can. We have made every effort, and I think a successful effort, to stop fraud, waste, and abuse. We believe generally the industry is cooperating, but we cannot rely entirely on the goodwill of industry.

We have suspended or debarred more than 1,400 defense contractors since 1981 and wherever there has been serious fraud, we have sought criminal indictments against the companies involved and against individuals.

We have suspended companies that have had problems which they have not corrected. We will continue those suspensions until the problems are corrected.

The inspector general has issued 125 reports which showed $1.1 billion in benefits, benefits from all our other audits done by the other agencies and services including the Defense Contract Audit Agency. We will have estimated savings in fiscal year 1985 of another $2.7 billion.

All of these are ways we have tried to cope with reduced top lines. These plus the reduction in inflation have enabled us to make substantial improvements.

Mr. Chairman, this is a very long statement. There is a great deal more that I think we should put before you, but I am going to ask that it be inserted in the record.

I will only say one thing about the Gramm-Rudman amendment. That is, we have complied with it fully. We took another $11 billion in new authority out this year, just a month ago.

We have in that one year, the first application of the Gramm-Rudman, a military personnel exemption. We were able to shield military personnel from the reductions required by that amendment. We took full advantage of it.

Had we not done so, we would have had to let 280,000 people go out of the Active Force last week. We do not have that exemption for military personnel or that ability to safeguard and shield them next year.

For that reason, it seems all the more important to me that Congress enacts the President's budget so that the Gramm-Rudman trigger is not pulled and we obtain the actual deficit reduction which is required by that in the first year. We can do that with the President's budget.

I would very much hope we bear in mind that the world is watching us to see what we do this year. I think we have to work together to inspire public confidence and respect.

I think the effort to provide increased military readiness and forces modernization that has yielded so much in the past few years does have to be sustained and that we do not have to be told continually after making the most severe cuts that defense must bear its share. Defense has borne its share.

Additional defense cuts would not be an effective shortrun means of reducing the deficit. Each dollar cut from defense reduces the deficit by only about 50 cents, due largely to reduced tax collections. This figure must be used cautiously. The closer the economy is to full employment, the smaller is the positive effect of DOD outlays in Federal tax revenues. The effect is not unique to DOD outlays; other Federal spending on goods and services—but not transfer payments—has a similar effect on Federal tax revenues.

In peacetime we think the budget is the most significant statement of our policy and our objective. I hope we will send a strong message to our friends that the security of the United States is not at the whim of economic statistics, but is a bedrock requirement and commitment which our Nation can easily afford.

Thank you.

[The prepared statement of Secretary Weinberger follows:]

STATEMENT OF
THE SECRETARY OF DEFENSE
CASPAR W. WEINBERGER

BEFORE THE
SENATE ARMED SERVICES COMMITTEE

IN CONNECTION WITH
THE FISCAL YEAR 1987 BUDGET FOR
THE DEPARTMENT OF DEFENSE

FEBRUARY 5, 1986

Introduction:

This is the sixth time I have appeared before the Congress to present the Administration's request for resources to ensure that the national security interests of the United States are protected. During the previous five years, the Congress and the Administration have shared the common goal of rebuilding our defenses to reestablish the balance of military power necessary for secure deterrence.

The product of that shared commitment has been impressive. Together, the Congress and the President have restored national pride, and international respect for the United States. The quality of the men and women in the military today has never been higher. American forces around the world are ready to respond to aggression. We are succeeding in getting large quantities of weapons deployed to our forces.

The political effects of this shared commitment are also evident. American resolve to resist aggression is evident; our alliance partnerships are stronger; and, an unwilling Soviet Union has been forced back to the arms negotiating table in the grudging realization that it will not be allowed to achieve military superiority over the United States and our allies. Further, the sequence of annual Soviet aggression against new targets that began in the mid-1970s with Angola, and culminated in the brazen invasion of Afghanistan, has ceased. Working together, the President and the Congress have come far in reversing a decade of neglect, restoring the deterrence balance, and updating our defense strategy and policy.

These are powerful and direct results of American resolve and commitment to bear the cost security requires. The responsibility to sustain these results lies before us as a continuing requirement. It is obvious that the FY 1987 defense budget represents a critical phase in the continuation of our shared goals and responsibilities. Shall we maintain our goal of rebuilding U.S. defenses or will we fall back and see this effort falter? The Administration remains committed to the sustained improvement of U.S. national security capabilities. But that goal is threatened as the Congress' commitment to the priority of national security wavers.

Few dispute the risks we face today. Soviet military capability grows unabated as it moves to confront the United States throughout the world. Risks to regional stability abound -- even here in our own hemisphere. While the strategic and conventional challenge to our security continues, terrorism and low intensity conflict have emerged as additional risks with which we must contend. Yet, in the face of this situation, some individuals maintain that our defense efforts must now be relaxed -- not because the risk is diminishing, not because a modern and responsive military capability is unnecessary, but because it is asserted that the United States cannot afford an adequate defense.

I have never accepted this assertion, nor the peculiar belief that American politics require that military preparedness must suffer in equal measure with dams and mass transportation projects in times of fiscal constraint. Those who argue that we should forego a significant increase in safety must explain why.

The central questions each of us must ask are:

1. Are we, for any reason, prepared to cut American strength in ways that increase the risks of war? Those who judge that, in order to reduce the Federal deficit, the United States should underfund the program previously agreed to by the President and the Congress and run higher risks to our security should stand up and say so.

2. With arms reduction negotiations ongoing and the Second Summit near, is this the time to tie the President's arm behind his back, rather than strengthening his hand? Make no mistake, the critical variable in the Soviet Union's willingness to negotiate seriously, to accept reasonable agreements, and to comply with those agreements, is their judgment of what we will

do, if they don't. Who is prepared to take responsibility for undermining the Soviet Union's incentive to accept an agreement for real reductions in strategic nuclear arms?

3. Is America not safer than we were five years ago? Does anyone want to go back to the U.S.-Soviet relationship of the late 1970s? Is American strength not the price for peace?

Budget Realities and Defense Spending:

I fully appreciate the fact that we are preoccupied with deficits. I understand the pressures confronting the Congress. Controlling deficits by reducing those areas of Federal spending which are improper or unnecessary is a goal I have always supported. Consequently, the Department of Defense has striven to take advantage of every opportunity to hold down defense costs through good management and contracting. In this regard I believe that defense has a good record if anyone will look at it.

Defense and Deficit Reduction:

Defense spending has been a continual contributor to deficit reduction exercises. Since transmittal of the President's FY 1985 budget in January 1984, defense budget authority and outlays have been reduced by $328.7 billion and $291.1 billion, respectively. Good management and the President's success in controlling inflation have enabled us to preserve force modernization despite these reductions -- which have often been the only real reductions in spending the whole budget process has sustained

There are those who seem to insist that the only acceptable evidence of defense participation in deficit reduction efforts is the cancellation of a needed defense program. The Department of Defense has been a victim of its own success in keeping programs on track while making do with less. The results of better management have been labeled as proof of waste and overbudgeting by those who would rather see public support for the President's defense initiatives fail.

The defense budget has become the target of opportunistic demagoguery, and our security has suffered. Prior to the application of the Gramm-Rudman cuts, the FY 1986 enacted defense budget represented a $24 billion reduction from the President's request. After absorbing the additional Gramm-Rudman-required reductions of $11 billion, the FY 1986 defense budget will represent a 6.2 percent real decline - the first time in 15 years that there has been an absolute decline to the defense budget below the previous year. One looks in vain to discover just what reduction in the risks we face occurred last year to justify this approach.

FY 1987 Department of Defense Budget:

Nonetheless, the Department of Defense (DoD) is keeping faith with the 0-3-3 percent real growth budget plan which the President and the Congress negotiated and which the FY 1986 Budget Resolution specified for national defense; just as in previous years we have conformed our requests to congressional agreements.

The President is requesting $311.6 in budget authority (BA) and $274.3 billion in outlays for the Department of Defense in FY 1987. The FY 1987 defense request is consistent with the goal of controlling federal spending as reflected in the agreement between the Congress and the President. In fact, the defense topline of $311.6 billion for FY 1987 is well below the $314.7 billion target specified in the budget resolution.

The size of the defense topline must be considered, of course, in the context of the total fiscal picture. However, we simply cannot use topline real growth rates as a yardstick for defense budgeting. In the final analysis, the Department of Defense does not have to spend a particular amount of real growth, but it does have to fund real programs to meet real risks.

The proper level of defense resources cannot hinge on snapshot calculations of real growth based on rapidly changing and arbitrary economic assumptions. The Congress must also look carefully at the programs being purchased. It must assess the priority of the defense program as an element of federal spending and the priorities of the programs within the defense budget. That is the way the Administration has developed the defense request and how the Department is ready to defend it. Unfortunately, there has been an increasing tendency by some in the Congress to refuse to address defense priorities and only want to deal with the defense topline.

Congressional Action on the FY 1986 DoD Budget:

Frankly, this approach makes a travesty of both the Administration's efforts to develop a budget that conforms to the latest available congressional direction, and the congressional efforts to review and adjust it to reflect its own priorities. Last year, for example, the Armed Services Committees spent many months enacting a bill that reduced the President's FY 1986 defense request by $19.2 billion. This was difficult work, but it did produce a defense program reflecting congressional priorities for a budget that size.

The problem is that the Congress subsequently decided that it didn't want a budget that size, but one $5 billion lower. That budget was enacted in the Continuing Resolution. Then came the Gramm-Rudman legislation and another $11 billion reduction, for a total reduction of $35 billion from the President's request. So, in the end, the Congress did not provide even the zero real growth in defense spending which it had endorsed only three months earlier, but instead a 6.2 percent decline.

America's defense posture requires a stronger commitment from the Congress than this; a commitment to return to a solid and consistent budget plan for national security resources. The Congress must decide whether we are going to budget for what we need in defense, as measured by the increasing risk we face, or whether we are going to squander past gains and return to the practice of regarding defense spending as the balance wheel of fiscal policy -- a practice which gave us the hollow forces of the 1970s.

New investment programs represent only a little more than one-tenth of total defense spending planned for FY 1987. Therefore, imposed reductions will threaten readiness efforts, pay and end strengths, and existing prior year contracts.

Neither the Department of Defense nor anyone else can manage a rational or efficient modernization program when budget resources change unpredictably from year to year, much less so when they do so from month to month, long after the fiscal year they affect has commenced. Program managers and military leaders have nothing on which to plan when budget levels constantly shift under their feet.

The Administration is presenting a sound defense budget for FY 1987. It is consistent with the Congress' own budget plan of a few short months ago. It builds upon the results of the resources the Congress has previously provided for defense. It continues the initiatives of the past four years. Its objective is to complete and sustain the efforts and improvements already realized. I urge the Congress to get the defense debate back on track by considering the FY 1987 defense budget request in terms of the priorities upon which it was built, and the risks we face from ever growing Soviet military strength.

Confronting Soviet Capabilities:

Development of our defense program and budget begins with an assessment of the current and projected risks to U.S. national security. In this respect Soviet military capability remains the dominant consideration.

The Soviet modernization program, which started several years sooner than ours and at a faster pace, continues unabated. The Soviet Union is aggressively acquiring a military force capable of accomplishing its stated goal of extending Soviet control and dominance throughout the world.

As a result, several military power balances long favorable to the United States have begun tilting in favor of the Soviet Union. Gorbachev's ascension to the post of General Secretary has brought about greater public posturing on issues vital to East-West relations in an effort to project a more positive image. And, while Soviet public relations may have undergone a cosmetic improvement, Soviet military growth continues with new strategic and conventional systems being fielded, and even more advanced systems under development or in various stages of research. The Soviet military, of course, will continue to receive strong support from the new leadership, and to enjoy its place of prominence in the allocation of resources.

Our security strategy is to build the strongest possible deterrence. We seek to protect our interests and those of our allies by preventing war. We seek to accomplish this by convincing potential adversaries that the costs of attacking us would far exceed any gain they could hope to achieve.

We do not, nor could we, seek to create a credible deterrence alone. In Europe, NATO continues to maintain a credible capability to deter a Warsaw Pact attack. In Asia, the military balance favors the Soviets, but with our current modernization programs the long-term trend favors us and our Asian allies and friends. The ability to project our power still favors us, but we must continue to monitor carefully Soviet programs enhancing their force projection capability.

NATO and Warsaw Pact Forces:

The Soviets have achieved an overall quantitative advantage in conventional weaponry. Further, the quality of their weaponry has improved significantly, often as the direct result of purchase or theft of western technology. Finally, the Warsaw Pact allies have created a military force that far exceeds one necessary to defend their territory.

Certainly there is not the slightest indication that a reduction in our commitment to invest in our military forces will result in a corresponding reduction by the Soviets and their allies or an abandonment of their strategic objectives. The evidence of the past is quite to the contrary. Indeed, if the United States were to devote the same percentage of its GNP to its military as the Soviets do, we would not be submitting an FY 1987 defense budget of $311.6 billion, but of some $700 billion.

FY 1987 Defense Program:

The United States must sustain the long-term program for rebuilding strength adequate for secure deterrence. If peace seems expensive, consider the alternative. By scrimping on strength, we can reduce our security and increase the risks of war. But if we fail to keep the peace, the cost to our standard of living, indeed to our lives and our country, would be incalculable.

The FY 1987 program is intended specifically to address the risks confronting the security of the United States within the fiscal constraints established by the Congress in the budget resolution last year.

The FY 1987 DoD budget reflects a reevaluation and revalidation of our basic force requirements. It is built upon the same force goals and continues the same modernization programs which the Congress has approved over the last four years. The only changes are further efforts to employ greater procurement economy and efficiency to achieve these goals in the most expeditious fashion.

Defense Manpower:

Active Duty Personnel

No turnaround these past five years has been more remarkable than the improvement in personnel quality and retention throughout all components of the military Services. The FY 1987 budget requests $76.8 billion for military personnel costs.

Of this amount, $67 billion supports the active duty personnel. Active force end strength is programmed to increase by an additional 14,000 in FY 1987. The majority of this increase, 11,400, supports the Navy's active fleet, which goes from 553 ships in FY 1986 to 566 in FY 1987. The growth in end strength will provide manning for new ships and squadrons and other direct fleet support requirements.

An additional 1,500 increase in end strength is requested for the Marine Corps to support continuing Fleet Marine Force improvements, highlighted by the addition of a Target Acquisition Battery, conversion of aircraft squadrons to AV-8B, F-4, and F/A-18 aircraft, and the activation of a ship's detachment for the USS Wisconsin.

Recruiting and Retention

While we continue to maintain favorable recruiting and retention levels of high quality personnel, some figures this year in retention raise concerns about our future ability to compete successfully in an increasingly favorable economy.

To counter this reversal, the FY 1987 budget continues our support for adequate compensation and an adequate basic standard of living for all our servicemembers.

Although budget constraints have kept military pay raises at modest levels during the last few years, the Administration remains committed to the principle of pay comparability and strives to maintain an overall military compensation program that can compete with other employment alternatives. Therefore, the current budget request proposes a 4 percent military pay raise effective October 1, 1986, which is comparable to anticipated private sector wage increases and prevents further widening of the pay comparability gap, currently estimated to be 8.3 percent.

Retired Pay

The FY 1986 Department of Defense Authorization Bill directed the Department to submit legislation to achieve a $2.9 billion savings by changing the military retirement system for new personnel entering the Service. The FY 1986 Appropriations Bill deleted the $2.9 billion from our budget but provided authority to transfer up to $2.9 billion of prior year balances back into these accounts to cover the higher costs we will incur until the Congress enacts the retirement changes. However, the Appropriations Act provides only temporary relief to the Department since it requires that, after May 1, 1986, we must revert to the obligation limits imposed by the Authorization Act. Legislation to change the retirement system and to lift the obligation caps was submitted to and is currently being considered by the Congress. If retirement reforms or relief from the obligation caps are not enacted, the Services would have to reduce military personnel by over 330,000 active and 176,000 reserve spaces.

Reserve Components

The increasing role of the Reserves demonstrates the success of our Total Force Concept. As a percentage of total forces, the Reserves are making a significant contribution.

The budget includes $9.8 billion in support of the Reserve components and reflects an increase of 52,000 end strengths for the Reserve and National Guard components. This increase will allow the Army Reserve to reach the goal of 90 percent trained-in-unit strength in FY 1987 and support 105 unit activations and 70 deactivations.

The Reserves continue to receive our most modern equipment and weapon systems. These include M-1 tanks, Bradley Fighting

Vehicles, AH-64 Apache and UH-60 Blackhawk helicopters, KC-130T tanker and C-130H cargo aircraft, as well as F-16 fighters.

The role of the Naval Reserve Force (NRF) continues to increase. In FY 1987, the first of two reserve squadrons of airborne mine countermeasures helicopters will be established. Eventually, all of our new MCM 1 mine countermeasures ships will be operated by the NRF, as well as an increasing number of amphibious assault and support ships.

Civilian Personnel

The budget reflects an increase of 4,400 civilian end strengths to provide for a wide range of programs and activities. This increase reflects the emphasis being placed on our efforts to improve the acquisition of weapons through improved contract administration and audits. The FY 1987 budget requests a 3 percent pay raise for the civilian workforce, effective January 1, 1987.

Modernization:

Strategic Forces

The FY 1987 budget continues the President's commitment to modernize and improve all aspects of our strategic forces in order to ensure a stable deterrent and create a favorable atmosphere for arms reductions talks. Funds are requested to purchase 21 MX test missiles and for research on new basing modes. In keeping with recent congressional limitations, we plan to place only 50 MX missiles in existing Minuteman silos. We are also requesting funds to begin full-scale development of a new small ICBM.

An additional TRIDENT nuclear submarine is requested as well as the initial procurement of 21 TRIDENT II (D-5) missiles, the first U.S. sea launched ballistic missile capable of retaliating effectively against hardened Soviet targets.

Research and development funding is requested for the continued development of the Advanced Technology Bomber and two new bomber-delivered weapons, for the advanced cruise missile, and for the short-range attack missile. No funds are requested for further procurement of B-1B bombers. That program has been completed below budget and ahead of schedule. The B-1 program remains as a model of how efficient defense acquisition programs can be if they are executed as planned.

Conventional Forces

In the area of conventional forces, we continue to place emphasis on maintaining modern forces that are properly equipped, adequately supported, and carefully balanced between active and reserve components and between the United States and allied capabilities.

(Army Modernization)

Our inventories are making substantial gains as the Army maintains its force level of 18 active and 10 reserve divisions. The FY 1987 budget continues our investment in our land forces by requesting 840 M-1 tanks, 870 Bradley Fighting Vehicles, and 144 AH-64 Apache helicopters.

(Navy/Marine Corps Modernization)

The FY 1987 budget supports the goal of a 600 ship navy by FY 1989, 15 carrier battlegroups and 4 battleship battlegroups. The budget reflects the procurement of 5 AEGIS ships; 2 CG-47 cruisers and 3 DDG-51 guided missile destroyers. Acceleration of the Navy's F/A-18 procurement, with procurement of 120 aircraft in FY 1987, demonstrates our commitment to achieve our inventory goals for this critical fighter/attacker.

(Air Force Modernization)

The budget commits the necessary resources, beginning in FY 1987, to achieve the 40 tactical airwing goal, up from our current 37. This is reflected in the procurement of 48 F-15 and 216 F-16 fighter aircraft for the Air Force. FY 1987 marks the completion of procurement of 50 C-5B airlift aircraft.

Supporting the modern weapon systems being obtained by our forces are continuing procurements of strategic and tactical missiles. The Army is procuring 700 Patriot and 4,180 Stinger missiles in support of its ground forces. The Navy and the Air Force are procuring an additional 2,337 Sidewinder and 2,095 Sparrow missiles for their tactical forces. And, the Air Force continues procurement of Ground Launched Cruise Missiles (GLCM), with an additional 76 planned in FY 1987.

(Special Operations Forces)

Emphasis continues to be placed on our Special Operations Forces (SOF). To ensure that we achieve the high state of readiness required for the Special Operations Forces to meet their key role of contingency response, the FY 1987 budget reflects a variety of modernization and expansion efforts.

Procurement of 5 modern transport and reconnaissance MC-130H airlift aircraft will provide modern avionics and electronic countermeasures capabilities, as well as an all-weather capability to transport troops in covert military operations. The budget also supports the development of materials for use by Army SOF aircraft in areas of Terrain Avoidance Radar, engine upgrades, and integrated cockpits.

Research, Development, Test & Evaluation:

Resources provided for research and development are of particular importance because they represent investment in future military capability.

As the President's highest priority effort, we are vigorously pursuing experiments and demonstrations to assess the feasibility of Strategic Defense Initiative technologies to support development decisions planned for the 1990s.

The LHX will replace the Army's aging inventory of lightweight combat, utility, and observation helicopters with a new technology, cost-effective rotorcraft. Further, we are actively exploring gun/missile combinations and new sensors to provide our forward area troops with an effective short range air defense capability now that we have cancelled the DIVAD program.

In an effort to assure that we can meet the air-to-air combat threat of the 1990s and beyond, we are investigating the latest technologies in fighter avionics and engines.

We are at the peak period in the development and testing of the JVX tilt-rotor aircraft which will drastically cut the exposure time for Marines as they perform their vertical assault mission.

And, development is well underway for a faster, quieter, attack submarine and its advanced combat system to maintain our relative capability against the latest Soviet submarine class.

Readiness and Sustainability:

In addition to manning and modernizing the force, we have placed a high priority on continuing the marked improvements made over the last four years in the sustainability of our forces. Special emphasis has been placed on the acquisition of sonobuoys, due to the important role they play in the early detection of enemy submarines, and to increases in surface-to-surface missiles, such as Tomahawk and Harpoon.

The progress achieved in the inventory levels of our munitions is truly a success story. But, these are the very types of successes that will be the first to turn into shortages under successive Gramm-Rudman sequestrations, since there is no possibility, under the law, of choosing any priorities.

Training Improvements

Given the quantitative advantage of the Warsaw Pact nations in munitions and weapon systems, the Navy and Air Force have emphasized increased training, through higher levels of flying hours and steaming days for our airmen and sailors, in order to use our munitions more effectively and efficiently. The Army has increased the rotation of battalions through the National

Training Center. These efforts now, at last, compare favorably with the training provided our adversaries. And, in FY 1986, we will be conducting 86 exercises in cooperation with 45 countries.

As we have increased our training and operating tempos, we have increased the need for maintenance and logistic support. Increased unit, intermediate and depot-level maintenance requirements are provided for in the budget.

With this budget, we will be able to maintain the readiness and sustainability improvements made to date and make modest further improvements in the ability of our forces to accomplish mission objectives. But we will not be able to maintain these improvements in readiness and sustainability if this budget is cut by congressional action or Gramm-Rudman sequestration, or, both as happened this year.

DoD Management:

Good management is the third major priority upon which this defense budget is based. There is more accountability within the Department than ever before. We are controlling cost growth. The cost growth for 84 major weapons systems was 1 percent or less for the two recent years. Compared with an annual cost growth over 14 percent in 1980 and many prior years, this is a major achievement.

What product is the American taxpayer buying today for less than we paid in FY 1982? The B-1B bomber, F/A-18 fighter, and AH-64 helicopter to name but three major weapon systems that are being bought for less today than we were paying when this Administration entered office. The secret of this success can be summarized in two words: competition and management. Since 1980, the number of competitive contract actions has increased by 37 percent, so that today more than two-thirds of all contract actions have been awarded on the basis of competitive bids. Management that demands performance has reduced cost growth, increased quality, and kept programs on schedule.

Repeated incomplete and erroneous reference to a few widely published items should not always be allowed to obscure the facts, and the facts are that the Department's management, with measurable results, is vastly improved. Additional details on these improvements are set forth below.

Auditing capabilities have been significantly improved and this request takes that further.

I hope the various outside studies now underway will take due note of the Department's successes in procurement in recent years, for the successes truly point the way to even better management in the future.

Acquisition Improvements

We have reduced the cost of our major weapons systems, delivered them on or ahead of schedule, improved the quality of those systems, and built up the industrial base to accelerate production should it be necessary in the future. These accomplishments were made, in large part, through wider use of competition, multiyear procurement, economic production rates and through stable procurement plans. The B-1B and M-1 programs are two notable successes in this regard; as well as our shipbuilding and aircraft programs and many others.

The total number of annual competitive contracts has increased by 37 percent to over 6 million contracts since FY 1980. In FY 1985 nearly 72 percent of all contract actions, amounting to $105 billion, were awarded under competitive contracting. Competition in shipbuilding has increased from 26 percent in FY 1981 to approximately 90 percent at the end of FY 1985. Currently, there are 44 major Department of Defense systems and subsystems that are dual sourced. Many of the remaining sole source programs are essentially follow-on contracts, awarded to the winning bidder after competition.

Savings from multiyear procurement and economic production rates are projected to be over $11.0 billion since 1982. While the dollar savings from these programs are substantial, an equally important benefit is the improvement in quality of weapons and the increase in the industrial base. These benefits flow from a stable work force, dual sourcing, and competition among subvendors associated with economic order quantity procurements and economic production rates.

Improving the Department's procurement and acquisition process has been a particular priority of mine. Additional people have been added to staff increased Department of Defense competitive procurement and to improve price surveillance. These efforts have reduced prices across the board. Under this program we have reviewed 250,000 items and designated 54,000 items for full and open competition. We identified another 51,000 items for purchase from the manufacturers, thereby eliminating "middle man" charges. We have documented spare parts savings in excess of $2.5 billion in FY 1984 and FY 1985. These initiatives have helped reduce the trend in spare parts spending by $11.1 billion from our projections in FY 1984.

We are pursuing management improvements whenever and wherever we can. And, while there is much that can be accomplished solely within the Department, we have made it clear to the defense industry that they, too, must be part of the solution.

The private sector has responded well. Some of our major suppliers have established their own spare parts awareness programs to get ideas from their employees on ways to keep costs down and improve quality. Contractors are voluntarily identifying items for competition or direct purchase from the actual manufacturers. And, many of our larger manufacturers are offering the best no-fault refund policy there is. It is simply this: if the Department thinks an item has been overpriced, the item can be returned for full refund.

Efforts to Stop Waste, Fraud, and Abuse

Still, we do not and cannot rely entirely on the goodwill of industry to prevent abuses. We have suspended or debarred more than 1,400 defense contractors since 1981. Where there has been serious fraud or illegal activity, we have sought criminal indictments from the Department of Justice not only against the companies involved, but also against individual employees and officials who abused their trust.

Further, under this Administration, we have initiated the most comprehensive set of audits and investigations in the history of DoD. To monitor and control prices, we are continuing our aggressive audit efforts. During FY 1985, the Inspector General issued 125 audit reports that identified $1.1 billion in potential monetary benefits. Potential monetary benefits from all other DoD audits and reviews, including Service audit agencies and internal reviews, increased the total to $2.7 billion.

Department of Defense worldwide contract audit activities are conducted by the Defense Contract Audit Agency (DCAA). DCAA audit services result in over 60,000 audit reports annually. These audits have produced an estimated savings of $8 billion in FY 1985. Recently acquired subpoena authority, combined with a variety of new audit products and increased resources, should strengthen this already valuable arm of the Defense Department.

Management Improvements

The Department has also successfully implemented a broad range of initiatives in cash management, debt collection, administrative systems, and management reviews. Cash management initiatives have accounted for $225 million in savings through FY 1985, and an additional $160.5 million are projected for FY 1986. We have documented nearly an 80 percent improvement in Department of Defense management controls, as measured by the Federal Financial Management Integrity Act. In another area of congressional interest, we have reduced computer leasing costs by implementing more cost-efficient purchases of ADP equipment.

We have not limited our efforts for management improvement and associated savings solely to this Department and its contractors. Since we and our NATO allies field the same weapon systems in the European theater, it makes sense to cooperate on the logistics support programs for those systems. We have joined weapon system partnerships with NATO allies for the Patriot missile and the Multiple Launch Rocket System and are actively pursuing similar arrangements for TOW and Lance. We are also working toward consolidated procurement of common NATO munitions.

Many of our allies have indicated support for SDI research and, in some cases, interest in participating. The United States and the United Kingdom recently signed a memorandum establishing the framework for British participation in the SDI program. Discussions are also being conducted with other NATO nations.

We have pursued every avenue to realize savings and efficiencies within the Department. We will continue to scrutinize defense operations, not just to see where waste and fraud is occurring, but to identify where it might occur. Such intense review should continue to be productive.

At the same time, there is a very counterproductive aspect in the current trend in congressional scrutiny of Department of Defense management. It is alarming to see an issue as important as the proper level of American defense preparedness hanging on questions such as whether departmental practices have resulted in over payment for a hammer or an airplane toilet seat as if a system of zero errors were the goal -- and particularly when the facts on those and other individual purchases are so distorted. It is discouraging to see some members of the Congress scrambling to publicize such instances, which have frequently been identified and corrected by the Department's own audit systems, as if they were participating in a fraternity scavenger hunt.

Such activities add little to the efforts that both the Congress and the Department already have underway and frequently detract from the important issues confronting our defense planning. They are used most frequently to distort the true picture of the defense acquisition process. As is the case in all large operations our procurement system is subject to isolated abuses and mistakes. But the important fact is that these problems are being constantly ferreted-out and addressed while the larger process continues to perform well.

We sign 52,000 contracts every single day - of course there will be mistakes. The real question is, is anything being done to predict and correct mistakes, and any objective look would conclude we have made great improvements and are continuing to do so. Objective examinations are very useful but uninformed, distorted, and continual criticism, designed primarily to cover the level of severity, can have a detrimental effect on the morale of the very skilled and experienced people, civilian and military, who manage defense procurement. These dedicated people, upon whom we rely to produce our defense capabilities, should not be used as punching bags by those who profess themselves as being "strong on defense."

The fact is that, by and large, the defense acquisition system is working. Over the past five years our forces have acquired more and better weapon systems and equipment than most people, in 1981, believed was possible within the budgets we originally sought, which were larger than defense actually received; and we are doing it without the cost growth and overruns which formerly plagued the Department.

The 1987 budget proposes to buy more program for less money than most observers would have believed possible just last year. This is largely because of our focus on stable programs and because of the acquisition reforms we have made that are working. We are seeing now the results of greater efficiency. The introduction of additional reforms where they are needed has the highest priority within the Pentagon and is a topic of constant attention.

Gramm-Rudman:

A few words are in order regarding the implications of the Gramm-Rudman law for the defense program of the United States. In Gramm-Rudman a unique step has been taken. The Congress has said that it wanted to create a club with which to beat down the deficit because your existing processes had not achieved the desired result. But a club is a very indiscriminate weapon and, unless the Congress is careful, the chief collateral effect of Gramm-Rudman may be to undermine the U.S. defense infrastructure in ways that encourage Soviet risk taking, discourage their willingness to negotiate lower levels of arms, and thus increase the dangers of war.

The additional five percent defense reduction imposed by Gramm-Rudman this year after congressional enactment of the FY 1986 budget, reduced funding for all appropriations, except Research, Development, Test and Evaluation, to levels below those in FY 1985. People who criticize reductions that affect readiness will be right, but they should know that the statute gives us no option. Readiness, of course, will be affected first as training, spare parts, ammunition, and other important support items absorb these required reductions. Procurement efficiencies will also be impacted as a result of the Gramm-Rudman effect of underfunding the FY 1986 program by five percent.

Our allies and adversaries alike will recognize that domestic fiscal pressures, more than national security requirements, are determining our budgets for national defense.

But if the Congress simply enacts the President's budget or produces a budget consistent with the President's request, it can avoid triggering a sequestering process that could literally reverse the results of the past five years, and throw defense planning into chaos. I cannot exaggerate the impact if failure to enact the President's budget triggers Gramm-Rudman.

Gramm-Rudman need not be triggered. The President has submitted a budget plan consistent with the FY 1987 deficit target. If this budget plan is not followed, however, and Gramm-Rudman is triggered in some of its more extreme scenarios, or if the Congress underfunds defense to avoid triggering, it could be the equivalent of unilateral disarmament. Moscow and our allies, who are regularly urged to spend more on defense, wait and watch with interest.

Conclusion:

I urge the Congress to get the defense debate back to the question of what this Nation's security requires. We have dwelt on terms like "real growth" and "toplines" too long and we risk losing sight of the reasons why we require a strong defense.

The Administration has made its priority choices regarding defense. The program before you is a good one. This defense budget is $3 billion below the budget specified by the Congress just a few months ago and agreed to by the President. I have yet to hear either a convincing explanation, or indeed any explanation, of why a funding level deemed necessary and affordable for national security a short time ago is now unacceptable. Surely no one contends the world has become more peaceful.

The Congress must make up its mind on this issue. No defense program, at any funding level, can function properly or efficiently, or deliver the safety required for the Nation, without consistency and sustainability and some concern for the realities of the world.

Military planners and program managers cannot be haunted annually by the spectre of a defense budget freeze or 6 percent reductions and remain effective. Neither the benefits of efficient contracting nor the required security of the Nation can be realized if we thus ignore our real needs.

The world is watching to see what the Congress determines this year. We should work together to inspire public confidence and respect for a defense program that ensures our national security. The effort to provide increased military readiness and force modernization which has yielded so much in the past five years should be sustained. The Congress as a whole should not be a party to the distortion and exaggeration about the defense program practiced by those who seemingly would prefer to see these results reversed.

In peacetime the defense budget is perhaps the single most significant statement of the United States' defense policy and objectives. We should send a strong message to friends and adversaries alike that the security of the United States is not a whim of economic statistics, but a bedrock requirement and commitment which this Nation can easily afford.

DOD TOPLINE REDUCTIONS

(BUDGET AUTHORITY in BILLIONS)

	1982	1983	1984	1985	1986	TOTAL 1982-1986
Amendment March, 1981	221.8	254.5	288.9	326.2	367.2	1,458.6
INCREMENTAL ADJUSTMENTS TO PLAN						
Sept 1981 through FY 1985 Enacted	-8.0	-15.0	-30.7	-39.4	-42.4	-135.5
FY 1986 Budget - Jan 1985	-	-	-	-	-11.1	-11.1
FY 1987 Budget - Jan 1986	-	-	-	-	-24.2	-24.2
PL 99-177	-	-	-	-	-11.0	-11.0
TOTAL ADJUSTMENTS since MARCH, 1981	**-8.0**	**-15.0**	**-30.7**	**-39.4**	**-88.8**	**-181.9**
Current TOPLINE	213.8	239.5	258.2	286.8	278.4	1,276.7
OUTLAY ADJUSTMENTS since MARCH, 1981	**-1.9**	**-16.1**	**-29.0**	**-51.9**	**-77.6**	**-176.5**

DOD CONTRIBUTIONS TO DEFICIT REDUCTION EFFORTS

($ BILLIONS)

	FY 1984	FY 1985	FY 1986
FEDERAL DEFICIT			
January 1984 Estimate	183.7	180.4	177.1
Actual	185.3	212.3	202.8 (e)
Difference	+1.6	+31.9	+25.7 (e)
DOD OUTLAYS			
January 1984 Estimate	231.0	264.4	301.8
Actual	220.8	245.4	258.4 (e)
Difference	-10.2	-19.0	-43.4 (e)

e = Estimated in President's FY 1987 Budget.

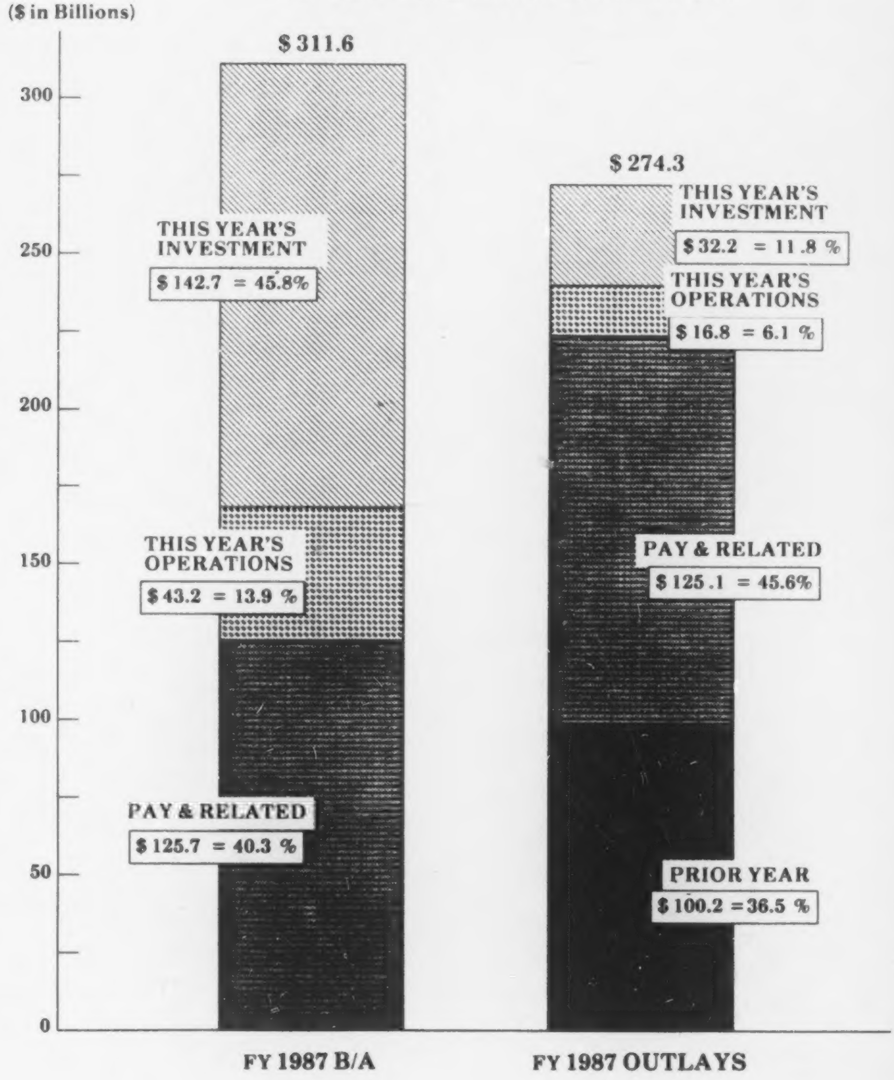
FY 1987 DEPARTMENT OF DEFENSE BUDGET
BUDGET AUTHORITY & OUTLAYS
(CURRENT $ BILLIONS)

	FY 1985	FY 1986	FY 1987
BUDGET AUTHORITY	286.8	289.4	311.6
PL 99-177	-	-11.0	-
NET B A	**286.8**	**278.4**	**311.6**
OUTLAYS	245.4	263.6	278.0
PL 99-177	-	-5.1	-3.8
NET OUTLAYS	**245.4**	**258.4**	**274.3**

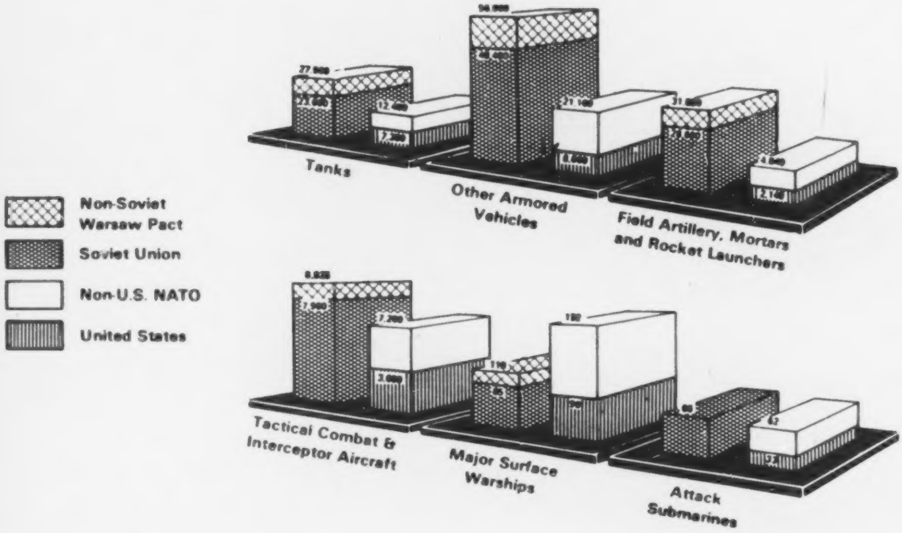
CONGRESSIONAL ACTIONS on FY 1986 DoD BUDGET
(CURRENT $ BILLIONS)

	BUDGET AUTHORITY LEVEL	BUDGET AUTHORITY REDUCTION
President's Budget Request	313.7	
(0- 3-3 % growth compromise)	[294.5]	(-19.2)
Authorization Bill	294.5	-19.2
Continuing Appropriations	289.5	-5.0
SUB TOTAL		**-24.2**
PL 99-177	278.4	-11.0
TOTAL BUDGET AUTHORITY REDUCTION		**-35.2**
TOTAL OUTLAY REDUCTION		**-19.1**

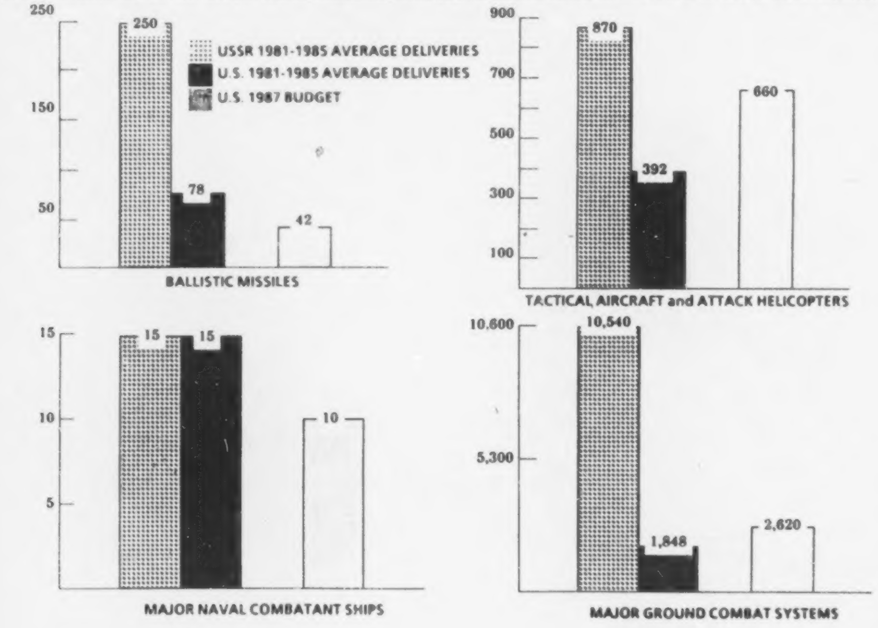
FY 1987 DoD B/A & OUTLAYS



PRODUCTION OF SELECTED WEAPONS for NATO and WARSAW PACT FORCES
(1975 - 1987)



COMPARISON of 1981-1985 EQUIPMENT DELIVERED with FY 1987 BUDGET



FY 1987 DOD BUDGET
BUDGET AUTHORITY BY TITLE
(CURRENT $ BILLIONS)

	FY 1985	FY 1986	FY 1987
MILITARY PERSONNEL	67.8	67.9	76.8
O&M	77.8	78.7	86.4
PROCUREMENT	96.8	97.3	95.8
RDT&E	31.3	35.5	42.0
MILITARY CONSTRUCTION	5.5	5.6	6.8
FAMILY HOUSING	2.9	2.9	3.4
OTHER	4.7	1.6	0.5
TOTAL	286.8	289.4	311.6
PL 99-177	-	-11.0	-
NET B A	**286.8**	**278.4**	**311.6**

FY 1987 DOD BUDGET
BUDGET AUTHORITY BY TITLE
(CURRENT $ BILLIONS)

	FY 1985	FY 1986	FY 1986 G-R-H	FY 1987
MILITARY PERSONNEL	67.8	67.9	-0.2	76.8
O&M	77.8	78.7	-3.8	86.4
PROCUREMENT	96.8	97.3	-4.7	95.8
RDT&E	31.3	35.5	-1.7	42.0
MILITARY CONSTRUCTION	5.5	5.6	-0.3	6.8
FAMILY HOUSING	2.9	2.9	-0.1	3.4
OTHER	4.7	1.6	-0.1	0.5
TOTAL	286.8	289.4	-11.0	311.6

FY 1987 DOD BUDGET
BUDGET AUTHORITY BY MILITARY FUNCTION
(CURRENT $ BILLIONS)

	FY 1985	FY 1986	FY 1987
ARMY	74.3	74.9	81.5
NAVY/ MARINE CORPS	99.0	98.5	104.5
AIR FORCE	99.4	98.3	105.2
DEFENSE AGENCIES	13.1	15.9	19.5
DEFENSE WIDE	1.0	1.9	0.9
TOTAL	286.8	289.4	311.6
PL 99-177	-	-11.0	-
NET B A	**286.8**	**278.4**	**311.6**

FY 1987 DOD BUDGET
BUDGET AUTHORITY BY MILITARY FUNCTION
(CURRENT $ BILLIONS)

	FY 1985	FY 1986	FY 1986 G-R-H	FY 1987
ARMY	74.3	74.9	-2.5	81.5
NAVY/ MARINE CORPS	99.0	98.5	-3.7	104.5
AIR FORCE	99.4	98.3	-3.9	105.2
DEFENSE AGENCIES	13.1	15.9	-0.8	19.5
DEFENSE WIDE	1.0	1.9	*	0.9
TOTAL	286.8	289.4	-11.0	311.6

* Less than 0.1

FY 1987 DEPARTMENT OF DEFENSE BUDGET

MANPOWER
(IN THOUSANDS)

	FY 1985	FY 1986	FY1987	Change FY 86-87
MILITARY ACTIVE DUTY				
ARMY	781	781	781	-
NAVY	571	581	593	+ 12
MARINE CORPS	198	199	200	+ 1
AIR FORCE	602	606	607	+ 1
TOTAL MILITARY [1]	2,151	2,167	2,181	+ 14
RESERVE MANPOWER				
SELECTED RESERVES	1,088	1,134	1,186	+ 52
CIVILIAN MANPOWER				
TOTAL CIVILIAN [2]	1,129	1,110	1,114	+ 4

Note: 1 Includes Military assigned to Defense Agencies and Cadets.

2 Civilian End Strength includes Classified, Wage Board, Foreign Indirect, Civilian Technicians, and Permanent Part-time.

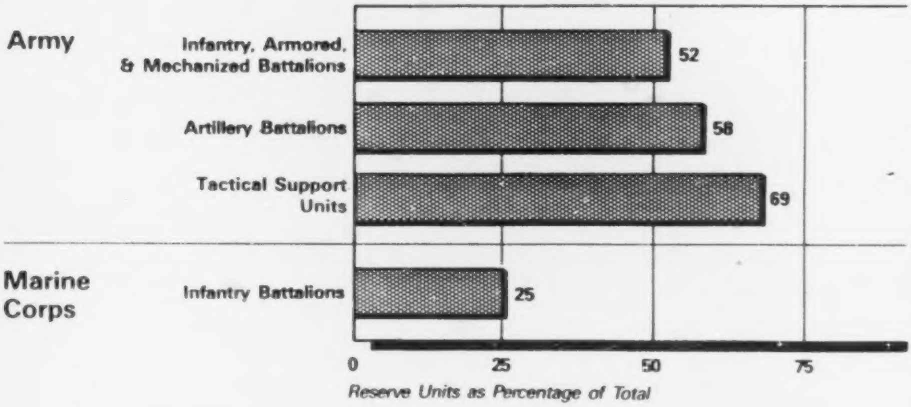
PERCENT OF RECRUITS WITH HIGH SCHOOL DIPLOMAS

Service	1980	1981	1982	1983	1984	1985
Army	54	80	86	88	91	91
Navy	75	76	79	91	93	89
Marine Corps	78	80	85	92	95	97
Air Force	83	88	94	98	99	99
Total	**68**	**81**	**86**	**91**	**93**	**93**

PERCENT OF FIRST TERM REENLISTMENTS

Army	50.6	55.0	58.6	45.3	43.8	43.1
Navy	36.7	41.7	50.3	55.7	58.0	54.5
Marine Corps	23.2	26.6	34.0	33.3	39.5	35.4
Air Force	35.8	42.9	56.9	65.8	61.9	53.9
Total	**39.1**	**43.0**	**52.9**	**51.6**	**51.2**	**47.8**

PROJECTED CONTRIBUTION of RESERVE COMPONENTS
(END OF FY 1987)



ANNUAL CHANGE IN GUARD AND RESERVE FUNDING
(Less Congressional Adds - $ in Millions)

FY 1982	FY 1983	FY 1984	FY 1985	FY 1986	FY 1987
+ 420	+ 1,534	+ 2,177	+ 3,594	+ 1,860	+ 740

Major Equipment Procured for Guard/Reserve

	FY 1985	FY 1986	FY 1987
Army			
AH-64 Attack Helicopters	18	18	-
UH-60 Blackhawk Helicopters	2	15	32
Bradley Fighting Vehicles	174	32	-
M-1 Abrams Tanks	180	60	120
High Mobility Multipurpose Wheeled Vehicles (HMMWV)	1,572	5,872	2,476
Navy			
UH-60 Blackhawk Helicopters	2	4	-
KC-130T Tanker Aircraft	2	2	-
MK-15 Close In Weapon System (PHALANX)	4	6	1
M-198 Towed Howitzers	-	50	36
High Mobility Multipurpose Wheeled Vehicles (HMMWV)	643	1,719	-
Air Force			
C-130H Aircraft	16	16	-
F-16 Aircraft	30	-	-
Fuel Tank Trucks	50	45	57
Flightline Tow Tractors	115	41	77
Fire/Crash Trucks	84	69	102

ARMY MODERNIZATION

	On Hand		FY 1986 & Prior Auth/Approp & soon to be delivered	FY 1987
	FY 1980	FY 1985		
Close Combat				
M-1 Tanks	34	3,021	1,956	840
Bradley Fighting Vehicles	-	1,936	1,735	870
Helicopters				
AH-64 Apache	-	45	408	144
UH-60 Blackhawk	-	684	93	78
Air Defense Missiles				
Patriot	-	612	1,563	700
Stinger	-	6,554	8,005	4,180
Artillery				
MLRS	-	204	144	44

NAVY/MARINE CORPS MODERNIZATION

	On Hand		FY 1986 & Prior Auth/Approp & soon to be delivered	FY 1987
	FY 1980	FY 1985		
Tactical Aircraft				
F-14A	322	430	54	15
F/A-18	-	234	252	120
AV-8B	-	32	105	42
P-3C	176	229	21	9
Ships				
SSN-688 Submarine	10	28	24	4
AEGIS Ships	-	3	17	5
Frigates	71	112	5	-
Battleship Reactivation	-	2	2	-
Trident Submarine	-	6	7	1
Strategic Missiles				
TRIDENT I	144	518	52	-
TRIDENT II	-	-	-	21
Tactical Missiles				
Sidewinder	4,510	5,899	1,823	627
Sparrow	2,236	2,753	2,932	1,716

AIR FORCE MODERNIZATION

	On Hand		FY 1986 & Prior Auth/Approp & soon to be delivered	FY 1987
	FY 1980	FY 1985		
Tactical Fighters				
F-15	507	728	105	48
F-16	157	838	398	216
Strategic Aircraft				
B-1B	-	2	100	-
Mobility Aircraft				
KC-10	-	35	57	8
C-5B	-	-	29	21
Strategic Missiles				
PEACEKEEPER	-	-	54	21
ALCM-B	12	1,472	267	-
Nuclear/Tactical Missiles				
GLCM	-	196	288	76
Sparrow	8,192	10,302	1,965	379
Sidewinder	11,617	16,753	3,581	1,710

SPECIAL OPERATIONS EXPANSION

	FY 1981	FY 1987
Total Funding ($ millions)	$441	$1,693
MC-130 Aircraft	0	5
Special Forces Groups (includes four Reserve Components)	7	8
Ranger Battalions	2	3
Psychological Operations Battalions	3	4
SEAL Teams	2	5 1/
SEAL Delivery Vehicle (SDV) Teams	0	2 1/
Seafox (Special Warfare Craft, Light)	8	36

1/ Includes two Underwater Demolitions Teams redesignated in 1983.

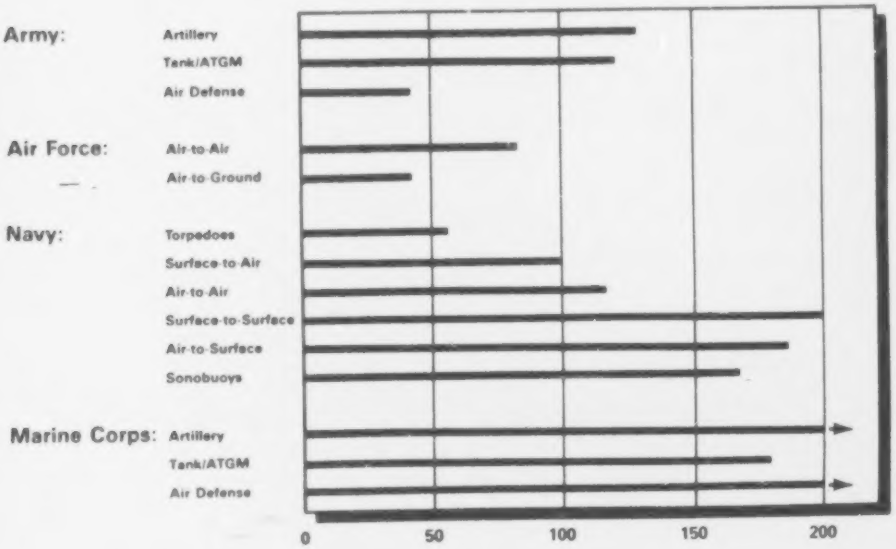
MAJOR FY1987 RDT&E PROGRAMS

($ in Millions)

	FY 1986	FY 1987
Strategic Defense Initiative	2,746	4,785
LHX Helicopter & Engine	114	155
DIVAD Alternatives	31	104
V-22 (JVX) Tilt Rotor Aircraft	555	387
SSN-21 Attack Submarine/SUBACS	576	670
Advanced Tactical Fighter	165	294
Small ICBM (Incl. Basing)	746	1,396
PEACEKEEPER (Incl. Basing)	696	721

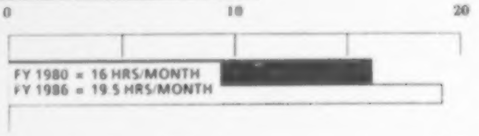
IMPROVEMENTS IN MUNITIONS SUSTAINABILITY

(PERCENT INCREASE OVER FY 1981 POSTURE)

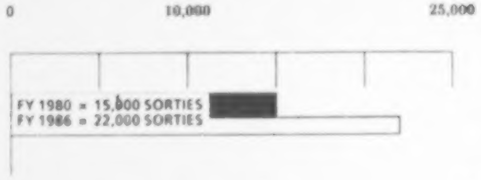


TRAINING IMPROVEMENTS

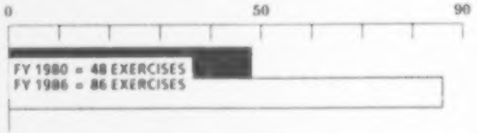
Air Force Tactical Aircrews:
19.5 flying hours/month



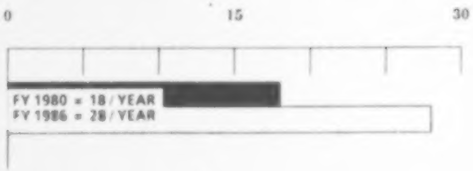
Air Force Tactical Aircrews:
22,000 Red Flag exercise sorties



Increased JCS Exercises:
86 Exercises



Army Battalions:
28 battalions/year rotating through National Training Center



ACQUISITION IMPROVEMENTS

- **Cost Growth for Major Weapon Systems:**
  - end of CY 1980 14%
  - end of CY 1983/CY 1984 1%
- **Multiyear Procurements:**
  - FY 1982 - FY 1986:
    - 40 multiyear contracts approved/$6.2 billion in projected savings
  - FY 1987 budget :
    - 7 multiyear programs requested/$2.1 billion in anticipated savings
- **Increased Use of Competitive Contracts:**
  - 72% of all FY 1985 contracts competitively awarded (40% in FY 1981)
- **Spare Parts Acquisition Initiatives:** Savings of $2.5 billion
- **Economic Production Rates:** Savings of $2.7 billion

MANAGEMENT IMPROVEMENTS

FINANCIAL MANAGEMENT:

- **Saved $225 million through improved cash management and disbursement procedures.**
- **Reduced the DoD's interest payment by $600,000.**

INTERNAL MANAGEMENT CONTROL:

- **Documented a 78% improvement in internal management controls.**

ADP:

- **Reduced uneconomical leases of ADP equipment by $905 million through cost-efficient purchasing.**

DOD EFFORTS TO CURB WASTE, FRAUD and ABUSE - FY 1985

CONTRACT AUDITS:

• **ESTIMATED SAVINGS**	**$8.1 billion**

INTERNAL AUDIT of DOD ACTIVITIES:

• **ESTIMATED SAVINGS**	**$2.7 billion**

INVESTIGATIVE ACTIVITIES:

• **RECOVERIES, RESTITUTIONS, and FINES/PENALTIES**	**$125.9 million**

FY 1987 DEPARTMENT OF DEFENSE BUDGET
LONG RANGE FORECAST
($ Billions)

	FY1987	FY1988	FY1989	FY1990	FY1991
BUDGET AUTHORITY					
CURRENT DOLLARS	311.6	332.4	353.5	374.7	395.5
OUTLAYS					
CURRENT DOLLARS	278.0	293.2	314.7	336.0	356.6
PL 99-177	-3.8	-2.5	-1.4	-0.5	-
NET OUTLAYS	274.3	290.7	313.3	335.5	356.6

Chairman GOLDWATER. Thank you, Mr. Secretary. That was very well presented and well thought out.

We are happy to have you before us for the first time, Admiral Crowe.

He has a very fine background that he brings to the Chairmanship of the Joint Chiefs. We expect rather immediate results.

You may submit your statement as you wish.

STATEMENT OF ADM. WILLIAM J. CROWE, JR., CHAIRMAN, JOINT CHIEFS OF STAFF

Admiral CROWE. Mr. Chairman, that is a pretty strong task you gave me.

I welcome this opportunity to appear before the committee to provide my assessment of the Nation's defense this morning.

I have submitted a statement for the record, Mr. Chairman, and to avoid redundancy and to economize on time, I would like to summarize those comments for a few minutes.

I am convinced that the posture of the Armed Forces is sound and I can tell you from personal observations in the field over the last 6 years as a major commander that your investment in national defense for these few years has paid huge dividends. I concur completely with your opening statement, Mr. Chairman, in that regard.

I likewise believe there is a great deal yet to be done to ensure the Republic's future security.

First, I believe that it is imperative to understand that our military posture provides us a great deal more than simply a shield against direct attack. I sometimes, as I tour our country, am not sure that is fully appreciated.

That same power, that same strength, underwrites our ability to use the sea lanes to communicate with our friends overseas to approach arms control negotiations with confidence, and to cement alliances which in turn enhance our own security.

As a matter of fact, our strength has been an indispensable pillar over the years, not only of our own freedom, but the freedom of our allies and friends as well. Before returning to Washington, I witnessed that firsthand, as I served in command billets that brought me in contact with most of our major allies and a good share of the Third World.

In NATO I observed that our military contribution to that coalition anchors its unity and political structure.

In the Pacific a succession of Asian leaders emphasized to me the importance of a powerful America with forces forward deployed in the Far East.

Last month I visited both Central America and the Middle East and found officials in both areas wanting a strong United States as a backdrop for their efforts to build a free and functioning society.

In essence, I would argue strongly that our military capability provides us a host of benefits, a return on our investment, so to speak, in terms of both national security and foreign policy.

At the same time it is important to recognize that our strategy is determined not only by our own interests, but also by the actions of our opponents.

Over the past 30 years every one of my predecessors has expressed concern about the Soviet worldwide threat in the evolving military balance. Today, the size of Soviet forces and the scale of momentum of the Kremlin's modernization efforts are still of significant concern.

I will not dwell on statistics and the adverse ratios we face because I believe the Russian accomplishments are well documented, and they certainly have been covered by the Secretary's statement.

In sum, this buildup is unprecedented in world history and on sheer momentum will carry us to the 1990's, if not longer. In this regard, I believe it is important to note a few realities.

Soviet military doctrine consistently stresses the offense and a war-winning philosophy. The Kremlin is today capable of waging war on two fronts, east and west. The U.S.S.R. now indisputably has a global military reach. Soviet arms customers are emerging as military powerhouses and troublemakers of Southeast Asia, the Middle East, Africa, Caribbean, and now Latin America.

The qualitative edge, and perhaps this is the most disturbing of these realities, the qualitative edge the west has long enjoyed is being steadily eroded.

All things considered, I am persuaded that the United States will be in a far better position to influence the Gorbachev regime if we continue discussions and negotiations from a position of increasing rather than sagging military strength.

Whatever you decide, let it be based on a full and unemotional appreciation of the peril that we face. These threats cannot be assumed away, nor is it necessary to overstate them. They are impressive and ominous in their own right.

STATUS OF ARMED FORCES

Let me now move to the fate of our Armed Forces. Last year General Vessey testified before this committee that by every commonsense measure, our forces are more ready than at any time in the recent past. That statement certainly remains valid today.

To begin with, manpower is the heart of our force structure. At all cost, I would not want to see the remarkable improvement in our situation in the last few years reversed. Overall personnel readiness is at its highest level of any peacetime period in our history.

About 50 percent of the force are careerists and as a result, we have a solid cadre of mid-grade officer and enlisted personnel which furnishes the high caliber leadership we need.

Mr. Chairman, at this point I might say as an aside that I feel the biggest or greatest reward of my career in the military is the opportunity to associate and work with, day in and day out, our young American men and women. The ones I am serving with now are the best I have seen in over 40 years of service.

In this regard, I am pleased to report that fiscal year 1985 was another successful year as measured by the quality of our recruits and overall retention rates. Secretary Weinberger referred to this in some detail.

However, we do see potential warning signs in enlisted retention and our ability to keep nuclear trained officers and experienced pilots. None of this is cause for great alarm at this time, but I would suggest that it serves to remind us that personnel readiness is very fragile indeed. Consequently, a healthy personnel structure is always the first priority of the Joint Chiefs of Staff.

FORCE MODERNIZATION

Turning to force modernization, the United States has no choice but to maintain a credible nuclear deterrent for itself and for nonnuclear allies that depend on us. Unfortunately, United States strategic modernization fell behind the Soviet efforts in the seventies.

As a result, we have been forced to refurbish all three legs of the Triad at the same time, the Peacekeeper missile, B-1 bomber, and Trident submarine. Current plans call for keeping 50 Peacekeepers in the modified Minuteman silos.

In addition, I will add to the Secretary's statement that we urgently need to continue research into more survivable modes for basing the second 50 missiles, development of a smaller ICBM mobile launcher, and advanced technology bomber.

In order to guard against tactical and technical surprise, it is essential to carry out the President's strategic modernization program which will close the gap for many years to come when it is completed.

I have just returned from Europe and was able to witness first hand some of the new conventional equipment which has come into the inventory as a result of investments made over the last 6 years.

Similarly, during my tour in the Pacific, a 2-year tour, we received a stream of modern weapon systems. I can tell you from personal experience this is most impressive. It is benefiting Active, Reserve, and National Guard Forces alike. It is not just quantity we are adding, but quality as well. It is well received. Wherever you visit the forces in our organization, the people will tell you that. They are excited about it.

It is also important, however, to stress that there is still much to do. To cite some end 1985 figures from the Active Forces, only one-third of our tank battalions have the new M-1. Only one-fourth of our mechanized battalions have the Bradley. Only one-fifth of the air defense SAM missile batteries are equipped with the Patriot. Only two-thirds of the Air Force's tactical fighter squadrons have the F-15, F-16, and A-10. Only one-third of the Navy submarine force is operating with the new 688 class. Slightly over one-third of the Navy's battle groups have the new Aegis-equipped ships.

More progress will be seen in the next 2 years as new equipment reaches our combat forces, but it should be clearly understood that we are still midstream in the modernization effort. To falter now will stretch out the entire process, leave many of our units behind the power curve in quality and, frankly, prove more expensive in the end.

Moreover, we would see the Soviets once again beginning widening the gap. The fiscal year 1987 budget recognizes this reality and continues the momentum which we have so carefully built up in the last few years.

JOINT TRAINING PROGRAMS

New acquisitions have been completed by a rigorous training program to try to capitalize on our enhanced capability. Our exercises are bringing together all the services and increasingly include National Guard and Reserve units.

The jointness we are talking about is beginning to appear in our exercises. We are stressing more and more the logistics side of warfighting. The Reforger exercise in Western Europe, Team Spirit in Korea, Bright Star in the Middle East are enhancing our ability to project power to those areas where we have strong interests.

These are just the tip of an exercise iceberg which is steadily becoming more joint, realistic, and innovative. Our training today is stimulating and exciting. I have had many experiences where our people tell me that and how much they appreciate the realism they are now enjoying in their training.

Other improvements can be seen in the sustainability or combat staying power of our forces. Over the last 6 years we have seen substantial growth in U.S. expenditures for sustainability. The funding for ammunition and spare parts has grown by over 25 percent. Ammunition inventories of all the services have improved materially.

In Europe, ground ammunition, which is the most difficult problem we have, is up 18 percent, and it has almost doubled in the Pacific. Our people are getting new confidence that they not only fight with sophisticated equipment and are well trained, but also that they can keep the field.

We must nourish that confidence. The fiscal year 1987 budget still puts considerable emphasis on sustainability, and I believe it rightly should. We simply must stay the course if we want a genuinely sustainable force as well as a sophisticated and well trained one. Otherwise, we will be spending a great deal for modern equipment with the one hand and reducing its effectiveness with the other.

Mr. Chairman, my summary is simple. We are on the road to recovery as a Nation in large part because we are on the road to recovery of our own security, our Armed Forces. All over the world we are regaining our self-respect and confidence. Our increasing military might is pushing back many of the challenges we face and is doing better in some of the things I mentioned at the beginning of my statement.

This excitement and confidence is also taking hold in the Armed Forces as we have reversed the depressing trend of the seventies. It is imperative that we nourish those roots.

There are other pressures on our Nation, but, in my view, none so large and dangerous as those I have mentioned. Shortcomings and economic deficits are challenges I appreciate. I do not envy you as you grapple with these problems.

I am not a sociologist, or economist, or politican, and I would not presume to advise you in fixing those problems. But as a longtime professional in national defense, I can tell you that we are at a critical juncture.

If we take the wrong path at this time, it will erode much of the progress we have already made and give the Soviets an opportunity to once again start widening the gap between us.

From a military perspective, this would be a serious mistake. It is imperative that we continue to convince the Kremlin that we are a credible adversary if we expect to deter them or if we expect them to talk and to negotiate with us.

Finally, as the leader of the free world, I submit that we must continue to be the bulwark and unifier of our allies so that we can all profit from our mutual strength. The fiscal year 1987 President's budget provides a reasonable means to overcome the downturn in 1986 and take another step toward these key goals.

I urge you to stay the course by supporting that budget.

Thank you.

[The statement of Admiral Crowe follows:]

PREPARED STATEMENT OF ADM. WILLIAM J. CROWE, JR., CHAIRMAN OF THE JOINT CHIEFS OF STAFF

INTRODUCTION

Mr. Chairman and members of the committee, I welcome the opportunity to appear before this committee today and provide my assessment of the Nation's defense establishment. While I am convinced that the current posture of the Armed Forces is sound, I likewise believe there is a great deal yet to be done to insure the Nation's future security—particularly in the face of a steadily increasing Soviet threat and Moscow's broadening use of surrogates. I am, of course, aware that there is some pressure to cut back defense appropriations in an effort to assist in reducing the current national deficit. Therefore, I believe it important, in my first opportunity as chairman to testify on the budget, that I comment not only on the status of our Armed Forces, but as well on the role military strength plays in U.S. policymaking and in the American relationship with the international community. I would strongly argue that deliberations on the military budget should commence with a clear understanding of what our defense establishment does for us.

THE ROLE OF U.S. MILITARY STRENGTH

The Secretary of Defense has provided the Congress with a comprehensive statement of U.S. defense policy. That statement notes, among other things, that the fundamental goals of our national security policy have remained essentially unchanged since the 1940's: To preserve the independence, freedom of action and territorial integrity of the United States; to preserve U.S. and allied vital interests abroad; and to shape an international order in which our freedoms and democratic institutions can survive and prosper.

These are not just empty words—they genuinely describe what our strength can and does do for us. It has provided us a great deal more than simply a shield against direct attack. That same power underwrites our dealings with the international community—for example, to use the sea lanes, to communicate with friends overseas, to approach arms control negotiations with confidence, and to cement alliances which, in turn, enhance our own security. In fact, our strength has been an indispensable pillar not only of our own freedom but also the freedom of our friends and allies around the world.

For five years before returning to Washington, I served in command billets that brought me in tough with most of our major allies and a good share of the Third World. In NATO, I observed firsthand that our military contribution to that coalition anchors its unity and political structure. When I served as USCINCPAC, a succession of Asian leaders emphasized to me the importance of a strong America with forces forward-deployed in the western Pacific. In their view, our strength has deterred Soviet interference and intimidation. Behind that bulwark they have been able to seek economic prosperity and political maturity in their own fashion and at their own pace. I was continually warned that a decided Soviet military superiority in the Pacific would be disastrous. In the last month I have visited both Central American and the Middle East. Clearly, the leaders in both areas want a strong America as a backdrop for their efforts to build free and functioning societies. To allow our strength to deteriorate would seriously undermine their efforts as well as sacrifice our own goals.

In essence, our military capability provides us a host of benefits in terms of both national security and foreign policy. Every day we are realizing a return on our investment as the Armed Forces provide an umbrella under which all our other cards are played.

These considerations have, over the years, shaped our general military strategy. Its key components are:

Collective security coupled with a vigorous overseas defense of the United States.

A strong and credible strategic deterrent to either nuclear or conventional military attack on the U.S. and/or its allies.

Capable forward-deployed conventional forces to assist allies and to deal quickly with emerging crises.

A central reserve to augment forward-deployed units or deal with the unforeseen over a wide spectrum of violence (to include low-intensity conflict and counterterrorism) and in a variety of climes.

The sea and airlift capability to project and support U.S. forces on a global basis.

The ability to ensure America's free and uninterrupted use of the seas for trade and security purposes.

A vigorous security assistance program to aid allies and friends in improving their ability to defend themselves.

A willingness to engage in meaningful arms limitation negotiations.

These principles, of course, combine to make up our military policy. Granted, it is a demanding strategy, but one that befits our goals and our position as a leader of the free world. Even though this strategy does not call for the United States to match its adversaries weapon for weapon, I often hear the argument that we should cut back our commitments to better fit our resources. But the proponents of such a philosophy don't seem to be able to reach agreement on what commitments to cut back, what regions to neglect or what allies to cut adrift. Without such a consensus, the argument has little force—particularly in today's interdependent and uncertain world.

THE THREAT

By definition, our strategy is determined not only by our own interests but also by the actions of our opponents. As Secretary Weinberger emphasizes in his statement, "in this respect the Soviet Union remains the dominant consideration." Moscow still harbors dreams of unlimited expansion and of the ultimate defeat of the free world. Yet communism's ideological appeal has steadily lost ground and the Kremlin has been plagued with a host of intractable economic and political problems. As a result, Soviet leaders are turning more and more to raw power to achieve their objectives either directly or indirectly—witness Afghanistan, Cambodia, Angola, Nicaragua, etc. The thrust of their military buildup is ambitious, hostile to free governments, and persistent.

Over the last 30 years, every one of my predecessors has expressed concern about the Soviet worldwide threat and the evolving military balance. Today, the sheer size of current Soviet forces, and the scale and momentum of the Kremlin's modernization efforts are of significant concern. Tremendous advances have been made in hardware over the last two decades, upsetting many of the advantages we held in the immediate post-war period.

For example, the strategic nuclear balance has shifted dramatically. The Soviets now enjoy superiority in ICBM's, medium-range nuclear forces and in mobile ballistic missiles. They are a burgeoning nuclear power intent on achieving dominance over the U.S. strategic deterrent. As to conventional arms, they lead the world. The Soviet inventory includes about a 4 to 1 advantage over the United States in tanks, 2 to 1 in aircraft, and 5 to 1 in artillery. These gaps will likely continue to grow since the Soviets have historically produced more weapons than the combined efforts of the United States and NATO. The personnel picture is no different. Active Soviet military forces outnumber United States active forces by about 2 to 1. Similarly, their progress in space commands deep respect; e.g., satellites, ABM's and ASAT's. Perhaps most impressive is the rise of the Soviet navy in the last 30 years from a short-legged regional force to a blue water fleet with a global reach. I won't dwell on statistics because Russian accomplishments are well documented in our posture statement and defense literature. In sum, this buildup is unprecedented in world history and on sheer momentum will carry well into the 1990's, if not longer. In this regard, it is important to note:

Soviet military doctrine consistently stresses the offense and a "war winning" philosophy.

Their forces vastly exceed those necessary to defend their own shores.

They are today capable of waging war on two fronts, both in the East and in the West.

Given their modern navy and political connections with satellite countries, they now have a "global military reach."

The Soviets possess an overwhelming superiority in the area of offensive chemical weapons.

Most disturbing, the qualitative edge the West has long enjoyed is being eroded. This has been achieved through large R&D investments, emphasis on technological education (4 times as many engineers as the United States in the last 10 years), piracy of Western technology, and a willingness to accept inefficiencies in the process.

Special mention must be made of the increasing Soviet tendency to act through surrogates. The U.S.S.R. is the world's largest arms salesman, delivering some $95 billion in weapons over the last decade. Approximately $80 billion worth of equipment, some new and some outdated by Soviet standards, has been funneled into the Third World during the same period. In turn, Soviet customers are emerging as the military powerhouses of Southeast Asia, the Middle East, Africa, Caribbean, and Latin America. Moreover, Moscow continues to be successful in having its clients act against Western governments and peoples. The result is a burgeoning terrorist threat, more small but fierce regional conflicts, and an increasing willingness of small anti-American regimes to challenge Washington. Perhaps this trend is the result of our success in preserving a rough balance of power which deters direct Soviet action against the West, but the fact remains it presents a serious and growing challenge to the U.S. military.

Concurrently, we see new leadership in the Kremlin which appears to be reinvigorating the party apparatus. We also know that with all of its military muscle, the Kremlin faces some very thorny political, economic and social problems. How all of this will affect Soviet behavior over the next few years remains to be seen. I am convinced, however, that the United States will be in a far better position to influence the Gorbachev regime if we continue discussions and negotiations from a position of increasing rather than sagging military strength.

Whatever you decide, let it be based on a full and unemotional appreciation of the peril we face. These threats cannot be assumed away nor is it necessary to overstate them. They are impressive and ominous in their own right.

CURRENT STATUS AND THE FISCAL YEAR 1987 BUDGET

Let me now move to the state of our Armed Forces. Last year, General Vessey testified before this committee that "by every common sense measure, our forces are more ready than at any time in the recent past." That statement remains valid today and is made possible by the support of our citizenry and the Congress. On behalf of the men and women in the Armed Forces, I thank you. Each of the service chiefs will testify in some detail as to the major concerns and the requirements of his service. I will speak to our overall warfighting capability from my perspective as chairman. To do this, I have selected five broad areas of interest—manpower, modernization, training, sustainability, and special operations forces. Before proceeding, however, a few words are in order concerning the FY 1986 fiscal climate.

As a result of a decision to level defense spending this year and subsequent across-the-board cuts, mandated by Public Law 99-177, we already have seen a number of funding dislocations which will impact on our military posture. This includes a five percent reduction in operations and maintenance funding which is forcing some belt tightening in such areas as base management, operations tempo, and essential maintenance. Further, we see some freezes in civilian hiring as well as realignments in military personnel rotation and travel accounts. While we are striving to work around these problems, I cannot emphasize too strongly the adverse impact of such cuts on the readiness of our forces and the stability of military life. They threaten to undo much of what has been accomplished in the last few years as we have fought back from the neglect following Vietnam.

Manpower.—In particular, I would not want to see reversed the remarkable improvements in our manpower situation, which is the heart of our force structure. Overall, personnel readiness is at its highest level of any peacetime period in our history. About 50 percent of the force are careerists and as a result, we have a solid cadre of mid-grade officer and enlisted personnel. The Nation can be extremely proud of the high caliber of its service men and women.

FY 1985 was another successful year for all the services. The quality of our recruits exceeded that of FY 1984. Ninety-three percent of all our non-prior service enlistees were high school diploma graduates and ninety-three percent as well scored average or above on the enlistment test. However, as you are aware, the youth population from which the services can recruit continues to shrink, and recruiting can be expected to become a growing challenge in the future.

Retention continued at very high levels for FY 1985 as well, but not without potential warning signs. Overall, enlisted retention declined from FY 1984 levels for all services in all categories except for first termers in the Army. This has aggravated shortages in some of our enlisted skills. In addition, the Navy still is having difficulty retaining sufficient nuclear officers and, along with the Air Force, continues to lose experienced pilots. In and of itself, none of this is cause for great alarm at this time. But it does serve to remind us that personnel readiness, recognized as the cornerstone of our national defense, is very fragile indeed.

The bottom line is that our most precious asset is quality personnel; consequently, as we approach the FY 1987 budget a healthy personnel structure is the first priority of the Joint Chiefs of Staff. It is imperative that we have programs which will attract and retain adequate numbers of dedicated, intelligent and disciplined soldiers, sailors, airmen and marines. Under no circumstances can we afford to return to the unstable manpower picture of the 1970's.

Modernization—strategic nuclear forces.—Turning to force modernization, the United States has no choice but to maintain a credible nuclear deterrent for itself and for those non-nuclear allies who depend upon it. Stated in different terms, we should be able to tell the Soviet Union: "You cannot coerce us with your nuclear arsenals, because if you launch those weapons you will suffer as much if not more damage than the United States."

Unfortunately, United States strategic force modernization lagged far behind Soviet efforts during the 1970's. As a result, we have been forced to refurbish all three legs of the Triad at the same time—notably with the Peacekeeper missile, the B-1 bomber, and the Trident submarine. Current plans call for placing 50 Peacekeepers into modified Minuteman silos. In addition, we urgently need to continue research into more survivable modes for basing the second 50 missiles and development of a smaller ICBM/mobile launcher.

By the end of this year, the first 20 of 100 B-1 bombers will have been delivered to the Strategic Air Command. Over the next several years, this program will partially and temporarily modernize the manned bomber element of our Triad. Concurrently, we must move ahead with the advanced technology bomber (ATB), so that it can be ready for deployment in the 1990's. Thereafter, we will have a prudent mix of B-1B and ATB types.

Additionally, we now have 5 deployable Trident I submarines, with 2 more on sea trials. Each carries 24 improved C-4 missiles. In various phases, contracting and construction work continues on an additional 6 submarines funded by Congress through FY 1986. This budget would fund the fourteenth Trident plus the D-5 missile. Because of its hard-target kill capability, the D-5 goes a long way toward increasing the potency and credibility of our strategic nuclear posture.

In order to guard against tactical and technical surprise, it is essential to have an updated and healthy Triad which will see us into the next century. The President's modernization program will give us that capability if it is fully carried out. We cannot afford to do otherwise.

Looking to the future, the Joint Chiefs of Staff wholeheartedly support the President's strategic defense initiative (SDI) which will muster the Nation's technological talent to determine whether an alternative to sole reliance on mutual assured destruction is feasible. It is both prudent and moral for the United States to explore means for ending the dominance of offensive ballistic missile weaponry.

Modernization—chemical warfare.—Additionally, the JCS fervently support efforts initiated in the FY 1986 budget to develop an updated deterrent chemical capability. This program is necessary to offset a serious disadvantage on the battlefield and to counter offensive and defensive asymmetries strongly favoring the Soviet Union. From the perspective of the American fighting man in the field, it is difficult to overemphasize this request.

Modernization—general purpose forces.—I have just returned from Europe and was able to witness first-hand some of the modern weapons and equipment which have come into the inventory as a result of investments made over the last six years. Similarly, during my tour in the pacific, we received a stream of modern weapon systems. It is most impressive and is benefitting Active, Reserve and National Guard forces alike. My FY 1987 posture statement documents these advances in some detail. It's not just quantity we are adding but quality as well. Test scores in gunnery and bombing are steadily climbing, in great measure because of improved munitions and fire control systems for use with tanks, artillery, fighter and attack aircraft and ships. Higher speeds in the M-1 tank and Bradley Fighting Vehicle have permitted a quantum jump in the pace of our land warfare capabilities.

Improved reliability and less time spent in maintenance are characteristics of these new weapon systems which equate to increassed capability. Similarly, recent investments in Airlift and Sealift have materially enhanced the ability to project power in every theater. I personally watched the fast Sealift ship (ALGOL) unload in Antwerp port a few days ago during exercise reforger. In six days it moved from Norfolk to Western Europe 33,000 measurement tons including 1,150 pieces of major equipment. Everything was unloaded in 21 hours. The integrated Aegis system is at sea and exceeding expectations in missile kill capability.

While we have made great progress over the last six years, it is also important to stress that we are only mid-stream in the conventional force modernization process. To cite some end FY 1985 figures from the active army, about: one-third of our tank battalions have the new M-1; one-fourth of our mechanized battalions have the Bradley fighting vehicle; two thirds of aviation companies have the improved Blackhawk Helicopter; and one-fifty of the air defense Sam missile batteries are equipped with the new Patriot.

In general, these modernized units give our people a fair chance to deter and defend in areas where they may be "first to fight" as in the central region of NATO. But those units not modernized—a majority of active Army battalions and many in reserve components—remain behind the power curve in equipment quality, particularly as reinforcements for NATO.

With respect to U.S. tactical Air Forces, I find similar trends. Over the last ten years, roughly two-thirds of the Air Force's tactical fighter squadrons have been modernized with the F-15, F-16, and A-10. During the same period, the Navy modernized over half of its tactical air squadrons with such types as the F-14 or F-18. For both services, this modernization process has not trickled down as much or as fast to the reserves as we would like to see.

Our "blue water" Navy also is only partially into the modernization process, particularly with the New Aegis-equipped ships which will add protection to our carrier battle groups in tomorrow's sophisticated electronic environment and help compensate for the Soviet numerical superiority. Only 4 battle groups are now so equipped. In addition, we remain mid-stream in efforts to modernize our nuclear attack submarine force with only 33 of the 688-class in a force of 96. If we are to face the future with the confidence that we can reinforce our allies, as on the flanks of NATO, or keep Soviet pressure off the sea lines of communication then we must persevere with these modernization efforts.

In summary, we have made great progress over the last six years updating our conventional forces so that they can survive on the modern battlefield and compete with the Soviet threat of today and over the horizon. More progress will be seen over the next two years as equipment currently in the pipeline reaches our combat forces. But it should be clearly understood that we are still midstream in the modernization effort. To falter now would not only stretch out the entire process, but would erode many of the gains already made and, frankly, prove more expensive in the end. The FY 1987 budget recognizes this reality and continues the momentum.

Training and exercises.—New acquisitions have been complemented by a rigorous training program designed to capitalize on their enhanced capabilities: our exercises are bringing together all the services and increasingly include National Guard and Reserve units. Over the last year, the JCS scheduled some 95 exercises designed to evaluate doctrine, tactics, procedures, and command and control arrangements involving multiservice and multinational components. Concurrently, overseas deployment training by Army Reserve component soldiers is up by nearly 50 percent compared with five years ago.

Likewise, we are stressing more and more the logistic side of war fighting. A few examples are illustrative. The reforger exercise in Western Europe recently tested every aspect of reception and onward movement of reinforcements from the Continental United States using host-nation support from our European allies. Team spirit performs a similar function for the reinforcement of Korea. Central command's bright star exercise is growing in realism every year and enhancing our ability to project power into the middle east. These are just the tip of an exercise iceberg. In sum, our training is steadily becoming more joint, realistic and innovative.

Sustainability.—Other improvements can be seen in the sustainability or combat "staying power" of our forces. As a system, sustainability includes war reserve stockpiles (munitions and spares), transportation capabilities, and industrial surge capacities. We worry about potential "war stoppers" or their impact on the theater nuclear threshold. Thus, our goal in sustainability is "logistic support to our conventional forces from initiation to successful termination of any conflicts."

In line with this goal, we have seen substantial growth in U.S. expenditures for sustainability over the last six years. In the past four years, the funding for ammunition has grown by over 25 percent; spare parts funding has doubled; and ammunition inventories of all services have improved substantially. In Europe, for instance, ground ammunition tonnage is up 18 percent, and it has almost doubled in the Pacific. Munition deficiencies which plagued us for years are improving steadily, but at the current rate of expenditures, it will be several years before we can near our goals and breathe easier.

The FY 1987 budget still puts considerable emphasis on sustainability and rightfully so. But years of neglect cannot be remedied easily or quickly. We simply must stay the course if we want a genuinely sustainable force as well as a modern and well-trained one. Otherwise, we will be spending a great deal for modern equipment with one hand and then reducing its effectiveness with the other.

Special operations forces.—A particular word about "special operations forces" is in order. While small in total strength, our special operations forces have enormous utility and value in peace, crisis, or war. Some are specifically tailored, dedicated, and readily available to protect American lives and property overseas against international terrorists or other non-governmental groups hostile to the United States.

SOF units are comprised of the U.S. Army Special Forces and Ranger battalions, U.S. Air Force Special Operations Forces and the U.S. Navy Seal teams. Major equipment initiatives in train include more helicopters with specialized mission equipment, improved AC-130 gunships, air transports, long-range communications, dry-deck shelters on submarines, and seal delivery vehicles, along with related support facilities.

Overall, the program remains on track in FY 1986 with: An increase in Army contingents including CH-47D helicopters and related support; expansion of the Navy's Special Warfare Training School and number of Seal platoons; and new equipment acquisitions by the Air Force to upgrade the SOF Aviation Support Fleet.

Simultaneously, considerable thought has been put into the command and control problem. I am persuaded that we now have a system which gives us considerable flexibility and permits us to exercise whatever degree of operational supervision is indicated by the circumstances.

Essentially, we have made remarkable improvements in SOF capabilities and readiness since the early 1980's. I also support the incremental approach toward improvement embodied in the general SOF revitalization program and in the particular FY 1987 submission. Many specialized and unique capabilities simply cannot be achieved on a "crash" basis. The program will require careful monitoring and management over the next few years to ensure that various components of the revitalization effort remain on track.

OVERALL CAPABILITY

Overall, the warfighting capability of the U.S. Armed Forces, active and reserve, remains at a high state. Keeping it there requires us to focus on two facts of life:

One, readiness is a composite of several factors: combat equipment, personel, maintenance, exercises, and supply levels. As General George Brown observed exactly ten years ago, neglect in any one of these areas can stress separate parts of the system with an impact on overall posture. The process of deterioration may seem gradual, but the breakdown in credible military capability, should it occur, would be instant.

Readiness does not determine by itself how well a force will acquit itself in combat. A force less than fully ready may do very well. Conversely, a 100 percent ready force still may not have adequate military capability becuase of quantitative or qualitative deficiencies in force structure.

The obvious conclusion is that force structure and readiness are not an either/or proposition. We need to be strong in both areas. The President's budget for FY 1987 strikes such a balance.

SUMMARY AND CONCLUSIONS

In summary, Mr. Chairman, our military posture today is driven by a number of real-world demands, many of which have evolved over the last 30 years. If anything, we have become more rather than less dependent upon global peace and security than we were two or three decades ago. Layered on top of these demands is a Soviet threat which has steadily increased over time in all dimensions of modern warfare and in all of the regions which concern us most. In this environment, I see no substitute for peace through strength. Further, I believe that the prospects of influencing the Soviet Union toward a constructive posture in world affairs will defend inevitably upon our capability to negotiate from a position of strength, both today and over the long haul.

Beyond these strategic imperatives, the President's budget for FY 1987 has several other military qualities which I support:

It strongly emphasizes those capabilities essential to U.S. security while covering others which only we can provide as a superpower and as a partner in global security arrangements.

It continues to flesh out essential improvements in our strategic nuclear and conventional force structure, along with new initiatives in the high fronties of technology and improvements in military compensation.

It maintains a carefully crafted balance between equipment modernization, personnel readiness, training and exercises, maintenance and supply, and substainability.

It provides that growth necessary not only to continue improvements in our military posture but also to lead our allies toward a similar commitment of resources. And most importantly it sends a strong message of deterrence to our enemies.

This is not to say that this budget eliminates risk. Our challenges are many and our adversaries are large, powerful and dedicated. On a typical day, we have roughly 475,000 soldiers, sailors, airmen, and marines serving on or around the Eurasian continent—essentially where our forward defense commitments abut or overlap the forward posture of Soviet Armed Forces. We count on these Americans and our allies to deter in a very high threat environment. We also recognize that they must be backed up by capable and ready forces in the United States for both deterrence and defense purposes. Yet, over thirty-five billion dollars has been removed from the FY 1986 budget from what we counted on just a year ago. This is negative real growth of about 6 percent. Decrements of this nature require significant changes and rebalancing. The price in defense is in stretching out and increasing the cost in modernization and in reaching sustainment goals. We will also give up more desirable levels of flying hours, combat vehicle mileage and steaming days. We are hitching up our britches and taking a greater risk. But this is as far as I advise we go. We need a balanced program that allows for some real growth in FY 1987. The President's budget does that.

Chairman GOLDWATER. Thank you very much, Admiral Crowe.

We will now start our questioning. Because of the good attendance this morning, we are going to limit the original round of questions to 5 minutes.

I will start with Senator Nunn.

Senator NUNN. Thank you very much, Mr. Chairman.

NATIONAL MILITARY STRATEGY

Secretary Weinberger, on the question of strategy, and I will then ask Admiral Crowe to answer this question, too, I am interested in the way we go about meeting our national military strategy. I will give you a for instance for reaction.

Recently the Chief of Naval Operations, Admiral Watkins, wrote in an article that U.S. Navy submarines will attack Soviet ballistic missile submarines in a conventional war even if that war has not crossed the nuclear threshold.

Without getting into a big debate, which cannot be done in 5 minutes, is that a wise or not a wise policy?

Was that cleared with you?

Is that part of our overall U.S. defense strategy?

Secretary WEINBERGER. We have discussed matters of this kind many times, Senator. We do believe that it is important in a beginning phase of a war, first of all, to do everything you can to keep it conventional, and, second, to do everything you can to terminate it as quickly as possible on terms favorable to ourselves, which means we must win it.

Senator NUNN. Does that mean that it is part of our strategy?

Secretary WEINBERGER. Yes. I think that it is a vital part, that we should try to eliminate the Soviet means of warfare as quickly as possible.

You have with these submarines always the question as to precisely what they are carrying at any given moment despite their capability. It certainly is an isolated part of the strategy, of the way we would go about dealing with the situation that we hope to deter.

One of the ultimates you have to bear in mind is that the Soviets know we have this capability. It adds to the discouragement to them to start it.

Senator NUNN. I wanted to make sure that was clear and that was officially a part of our strategy.

Admiral Crowe, was that matter discussed with the Joint Chiefs before that was issued publicly?

Admiral CROWE. If it was, it was done before I came here, Senator. But it has always been my understanding that it was.

We anticipate, of course, they will do the same to us, that they will attack our missile submarines. We know from their literature, we know from their practice, a good deal of what they are thinking, that they anticipate they will be attacked.

Senator NUNN. Let me shift to another subject, Admiral Crowe.

You mentioned improvements that have been made in the last 6 years and I agree with your analysis of those. I think we have made significant improvements.

I also believe that the gap is continuing to widen. According to the charts that Secretary Weinberger shows, the gap has widened every year in terms of the NATO-Warsaw Pact even when we reach the peak of expenditures. You mentioned if we decreased expenditures, the gap might be widening again.

Is that in conflict with those charts? Do you think we have actually narrowed the gap? If so, how does that reconcile with the charts we have seen which show the gap widening every year?

Admiral CROWE. I consider the charts a static measure, nothing more. But the improvements that have taken place in our own forces are not only in terms of some new numbers. We put great emphasis on the quality of our personnel. I think it is an advantage we enjoy over the Soviets. I think it is the most remarkable advantage we enjoy.

Senator NUNN. Your assessment is qualitative, not quantitative?

Admiral CROWE. Also dynamic. We analyze, we simulate. We have seen, through the full use of the improvements that have been made in our services, that our position vis-a-vis the Soviets has improved.

Senator NUNN. I think we need to devise some new charts, then, because the charts we see each and every year are quantitative charts. Secretary Weinberger gave us quantitative charts this morning which directly conflict with what you said about the gaps not widening; in fact, going the other way for a while.

I hope your assessment is accurate. We need that dynamic assessment. We need to capture somehow where the American people and the Congress can get a picture of what is happening.

Do you have a chart that will show that dynamic and qualitative assessment?

Secretary **Weinberger**. We have one which shows a list of things in the pipeline that you authorized and appropriated funds for. They are not yet delivered. That will make significant improvements in what we have.

The problem is we do not control the Soviet rate of expenditures. We cannot sit here and close the gap unless the Congress is willing to spend at least the amounts we originally requested.

We pointed out how many reductions there have been in those requests. These charts show how much gain we have made. The Soviets always have under their system an ability to outspend and outproduce us, because that is the only thing they do well, and that is the acquisition of military power.

Senator **Nunn**. The problem I have in the charts is NATO versus Warsaw Pact rather than the United States versus the Soviets. What you did was use the charts NATO-Warsaw Pact on quantitative. There was no qualitative assessment which Admiral Crowe plugged in which is very helpful when we have that.

You used United States versus Soviet expenditures. That is not a proper analogy when you are talking NATO versus Warsaw Pact. We need a chart showing NATO-Warsaw Pact expenditures if we begin to think about how we do something about the difference between output.

Secretary **Weinberger**. I do not think we used charts using United States-Soviet expenditures. I made reference to it.

The important thing is the output. What do they get for it? With their wage scale, they can get a great deal more than we can.

Senator **Nunn**. I agree. Something is wrong with the way we do business when we increase dramatically our expenditures and we do not see the charts reflecting that at all. There is no chart at all showing anything subjective or anything qualitative or anything dynamic.

We are going to have to find different ways to measure this if we are going to have a true reading.

Secretary **Weinberger**. It is a little difficult to show on a chart the difference in quality between a Soviet soldier and an American soldier. Take my word for it—there is a tremendous difference in our favor.

Senator **Nunn**. I think you are right on that. I think quality has improved. We need to learn how to capture that somehow.

Thank you.

Chairman **Goldwater**. Senator Warner.

Senator **Warner**. Thank you, Mr. Chairman.

Mr. Secretary, I want to compliment you on the presentation of this strategy. It is probably more comprehensive than it has been in previous posture statements.

I still believe, however, there is a deficiency in this basic procedure by which the Congress approaches determination of the authorization and appropriation for the Department of Defense. That is that we begin to get your perspective in this presentation of the strategy. Subsequently, the Secretary of State will come up and present his perspective.

As we work down through the budget process, we can find differences and voids. My suggestion is that the President should, immediately following his State of the Union Message, present a national comprehensive strategy and that could best be achieved by you and the Secretary of State coming before the Congress, presumably before a joint session of this committee with Foreign Relations, and present that strategy.

That would avoid divergencies as we proceed through the process.

Would you be amenable to that procedure?

Secretary **Weinberger**. Yes; I think that is an excellent idea. We do a great deal of it beforehand. There is no difference between the State Department and ourselves on our budget or theirs for foreign assistance or for the protection of the Embassies, or any of the other areas where we have a congruence of interest.

The presentation of the message by the President to the Congress would be fine, and as for joint hearings of the committees, I am strongly in favor of them and would be delighted to appear on any such occasion. I think that is a very good idea.

Senator **Warner**. I have made that suggestion to our chairman and Chairman Lugar and I understand both chairmen are quite amenable to the process.

Now, turning, Admiral Crowe, to the question of strategy and the adequacy of the forces, you have spoken today about the readiness and the modernization program, but one of the advantages of looking at a comprehensive national strategy would be to compare that threat and our implementation of the existing forces to meet that threat and determine whether or not in fact the U.S. forces are adequate, standing alone or in conjunction with our allies.

ADEQUACY OF FORCES

My question to you is: In view of the over 40 commitments that we have by virtue of treaties and other agreements, are the Armed Forces of the United States today adequate to meet the strategy portrayed in this posture statement?

Admiral **Crowe**. I will defer the political side of the question to the Secretary, Senator.

I think we have always testified, I think every year it has been consistent, that there is some risk, of course. Our point is that you must be aware of the risk.

We cannot necessarily do all the things we would like to do simultaneously, but we have other ways to approach our commitments, such as employing forces sequentially and within given constraints on the services. As I said in my statement, you have your interests, you have your threat, you have reality to meet. I think under the constraints of all three parameters, we do the best we can.

ARMS CONTROL

Senator **Warner**. Turning to the question of arms control, last night the President said:

"If the Soviet Government truly wants an agreement to reduce nuclear weapons, there will be such an agreement."

I think the country wishes to support our President in this endeavor. What concerns me is a premise that he has whereby the goal is the ultimate elimination of all nuclear weapons.

No matter how commendatory that goal may be, it seems to me there is a corollary obligation on the President to begin to point out now with emphasis equal to the emphasis he places on this zero goal of nuclear weapons the impact on conventional forces.

Persons following that dialog on zero nuclear weapons are led to believe indeed it would be a more peaceful world and possibly we could reduce vast sums of money now going into the modernization program, for example, of our strategic systems.

In my judgment, if we were to pursue such a goal or even achieve a substantial milestone toward that goal, it would be a very heavy impact on expenditures needed for the conventional weapons which, by and large, are more expensive than strategic systems. Also severe impact would result on our allies who, although they have a much smaller nuclear force, are relying primarily upon the conventional forces for their deterrence of aggression and primarily on the commitment we have in the NATO framework.

My question is: Do you not believe we should begin to give equal emphasis to the impact on conventional weapons of pursuing a goal of zero nuclear weapons?

Secretary **WEINBERGER**. Senator, I think on the goal of the President, the short answer to your question is yes, we should. The President's goal, his hope and dream, which I think reflects directly the hopes of most people of the world, is to do something that will effectively reduce and ultimately eliminate nuclear weapons.

We all know and the President knows that will not eliminate war. He certainly has always coupled it, either in the same words or in other speeches, with the great desirability of reducing conventional weapons with the parties on both sides, so that we can maintain deterrance at a much lower level.

He also has emphasized what has to be emphasized and that is adequate verification. We never had adequate verification with the Soviets. We have to have it. They have broken so many agreements in the past, that we cannot have any dealing with them without adequate verification that they will not do it again.

That is risky business to make reductions based entirely on promises, when the promises by the promisor have been broken so many times before.

Another thing that the President has in mind, in his desire and his hope for a strategic defense initiative which he believes, and which I believe, we can have adequate research. We do not know if we will develop it, but we all have hopes. My hope is linked with optimism based on my knowledge of the quality, and capability, of the American people, and the people of the world that we are asking to participate in this.

If we can get that, that will be a vital part of it, because even if the two super powers reduced, or eliminated nuclear weapons, other nations have them and it would be vital to a defense.

Yes, I think the goal has to be creating the condition under which we can exist together with far fewer weapons and far less of a need to maintain the kind of deterrence we have to maintain now, and will have to maintain until we get to that very hopeful period, which I hope will come, where we can make deep reductions of all kinds of weapons, through verifiability, parity on both sides, and keep these equations of deterrence, which we have to recast virtually every day, at levels that will deter war.

You ask if Admiral Crowe's reports are accurate. As of a given time, we can compute a set of equations of what we think they are. But a lot of those computations are based on weapons that will take a long time to acquire. Just as the chart shows, things are in the pipeline.

What we have to do is make sure we have adequate forces that will deter attack at any given moment. That requires in this kind of world, with an opponent that will not let us close the gap, a very large budget.

Senator WARNER. Mr. Chairman, my time is up.

Chairman GOLDWATER. Senator Hart.

Senator HART. Thank you, Mr. Chairman.

Mr. Secretary, the country is in a fix. I would like to try to find out what role you intend to play in helping to solve the fix.

In the judgment of this Senator, the fix we are in is not the result strictly of the military buildup. It seems to me the fix is the result of trying to finance the military buildup with a tax cut. That led to the deficit.

If we had instead said the Russians are coming, and they are awesome, and we have to catch up and do these other things and the President said, "I intend to increase your taxes to pay for this," we would not be in this fix.

Unfortunately, the so-called supply side experiment failed, a beautiful theory was murdered, as someone said, by a set of ugly facts and we are in a fix.

Coincidentally, the mayor of Boston this morning, Mayor Flynn, handed me a report, "The Broken, Hungry, Homeless, Poverty in American Cities in 1985." I will read three of the summary conclusions by the mayors of these cities, Republicans and Democrats.

> In every task force city, save one, overall demand for emergency food assistance during 1985 on average increased by 28 percent. The number of families with children requesting emergency food assistance increased during 1985 by an average of 30 percent. An average of 17 percent of the demand for emergency food assistance currently goes unmet in the responding city.
>
> Low benefits and public assistance programs, poverty and employment problems lead the list of reasons for the persistence of hunger.
>
> That demand for emergency shelter increased in nine out of ten of the surveyed cities in 1985.
>
> The average increase was 25 percent.

The summary goes on and it is pretty grim. Now, it seems to me that your role in helping to solve this problem evolves this way:

You can insist rigidly on the set of numbers you presented to us, and I think that would lead to almost total rejection of your budget by the Congress, and I do not think any member of this subcommittee believes you are going to get the numbers that you have requested.

If you insist on that, then it seems to me we are going to have the kind of congressional micromanagement that you and others in the Defense Department also reject, which leaves, it seems to me, one other option and that is for you to help this committee and the

Congress form a consensus to sustain the investment in defense that all of us believe is necessary, but in affordable numbers, under budget conditions, including additional revenues and investment in homelessness and hunger and poverty that many of the rest of us believe is necessary.

The real question I have is: Are you going to, as you have in the past, insist on the numbers that you have put up here and reject any effort to seek any kind of compromise, not only for 1987 but for 1987, 1988, and 1989, that many of us would like to join you in?

Secretary WEINBERGER. The problem of compromise is that it brings you up to numbers that are lower than the Nation's needs, and the promises are never kept. We compromised, came down to 0-3-3 last year, well below what the President wanted and what I thought was necessary. We were reasonable, we were pragmatic, moderate, compliant with requests from the Congress.

In August Congress passed a resolution which gave us that amount, zero real growth in 1986 and 3 percent in 1987, $314 billion. What happened?

Before the end of the year Congress was $5 billion under it. When Gramm-Rudman passed, we were $11 billion more under.

We have compromised. We continue to try our best and what is before you represents a real compromise, far below what really should be necessary to keep this momentum after a 6.3-percent reduction.

That experiment did not fail. The economy is very pliant. The tax cut produced a 42-percent increase in revenue, but the problem was that we had a 61-percent increase in expenditures. Defense did not cause that.

Less than one-third of that increase in expenditures was defense. This is over the 5-year period that we have been here. What we have now is an increase in nondefense expenditures that were two times that of defense and that produced a lot of that increased deficit.

In the last 3 years defense outlays from the January submission went down $10 billion in 1984, $19 billion in 1985, and $43 billion in 1986. During those times when those defense expenditures, those estimates, those outlays were actually going down—and these are actual in all cases excepting 1986 where it is still an estimate—$10 billion one year, $19 billion another year, $43 billion another.

Those are reductions from deficit estimates. What happened to the Federal deficit during that period? In 1984 it went up $1 billion when we were going down $10 billion; the next year it went up $10 billion when we were down $19 billion; and the deficit went up $22 billion the next year when we went down $43 billion. We have given at the office, the store, and at the Pentagon. We have made reductions and we have not caused deficits.

You can make a very good argument, which I do not make because it isn't just jobs I am talking about; that we contributed a great deal of buoyancy to the economy by the tax revenues produced.

Senator HART. I gather your answer is no. Therefore, it is pretty safe to say that you will not get the defense budget that you have requested. Anybody who thinks you can finance a military buildup with a tax cut simply is not living in the real world.

Secretary WEINBERGER. When a tax cut produces a 42-percent increase in revenue, it is a very real world. I told you this morning that if we did not need the percentage increase we have asked for, I would suggest respectfully that perhaps not you, but certainly some of your colleagues, would put this in your pocket and in 2 months will come around and say, "How much more will you take?"

That has been the history in the last 5 years. We have fought hard to get the kind of increases that Admiral Crowe and others have spoken of to make such major improvements.

Senator HART. We will do our best even without your help, Mr. Secretary.

Secretary WEINBERGER. You will get all the help we can give because you need it.

Chairman GOLDWATER. Senator Cohen.

Senator COHEN. Thank you, Mr. Chairman.

Is the inflation factored in by the Commerce Department, 3½ percent for fiscal 1986, 1987?

Secretary WEINBERGER. We have used the inflation factor given us by OMB and the Congressional Budget Office. I believe it is around 3.8, 4.1. We have used that not only for the budget, but also for the special weapons inflators.

The special weapons inflator is no different this year than the general inflator.

Senator COHEN. I was interested to hear your comment about the significance of qualitative advantage that the U.S. soldier enjoys over the Soviet soldier. I hope during one of your trips, Admiral Crowe, to West Germany, perhaps you might remind them that we have that kind of superior soldier in the field because one of the first things when I start talking about increasing defense expenditures in Western Europe, particularly in Germany, they say: "Yes, but we have a draft and you have a voluntary force."

The implication is somehow we have inferior soldiers compared to them and perhaps even the Soviets. I hope you will remind them about the quality we have in the field.

Mr. Secretary, several years ago the President established the Scowcroft Commission consisting of a group of defense experts to try to find some sort of consensus on where we ought to go with strategic policy.

The Commission determined the most destabilizing factor in our strategic relationship with the Soviets was the presence of large land-based MIRV'd ICBM's and has recommended both sides try to move away from the fixed ICBM's to smaller, preferably single warhead, mobile missiles.

And I believe you endorsed the Scowcroft Commission report and recommendation 2 years later, which was essential for a consensus up on the Hill at that time to go forward with the MX, 2 years later the administration has proposed elimination of all mobile missiles.

I was wondering if that is your recommendation.

Secretary WEINBERGER. Yes; the Scowcroft Commission did indeed recommend the addition to our forces of a small single-headed missile.

They also recommended in unequivocal terms that we carry out the President's full strategic modernization program including 100 MX missiles.

Senator COHEN. Aside from the numbers, the key element of Scowcroft was to move away, both United States and the Soviets, from the fixed ICBM's.

Secretary WEINBERGER. After the President's modernization program was completed.

Senator COHEN. There was no precondition.

Secretary WEINBERGER. They said the strategic modernization program of the President, as set forth in October 1981, should be completed intact.

Then they added we should have the small missiles. They expressed the hope we could move away from the large missiles. The Soviets already have deployed two mobile systems, one MIRV'd and one single headed.

What we are asking for is a treaty which could eliminate that.

Senator COHEN. Eliminate?

Secretary WEINBERGER. Eliminate all mobile missiles. Meanwhile, because the Soviets have not agreed to that, we think it is essential that we proceed, with the approval of Congress, to get both the missiles that we have, the small missiles as well as others.

What you have to bear in mind is that while you are seeking agreement, you cannot let these gaps open up, and there is one now with the two mobile systems the Soviets have deployed, one in violation of the agreement they say they are adhering to, that is the SS-25.

If you do not try to maintain your deterrent, they have no incentive whatever to make an agreement that will eliminate mobile missiles.

Senator COHEN. I think it makes sense to eliminate MIRV'd mobile missiles, but not to eliminate all mobile missiles.

Admiral CROWE. That point of eliminating mobile missiles was in the context of a larger package which surmised we would have control of the ICBM's and both sides would come down 50 percent, et cetera.

Senator COHEN. Admiral Crowe, I will ask one question of you.

SPECIAL OPERATIONS FORCES

On page 19 of your statement you refer to the special operations forces. You correctly say we are much better off today than we were in 1980. I am satisfied they are better trained and equipped. We also have serious shortfalls. We have less Pave Low helicopters than we had in 1980. We may have better equipped troops, but we may not get them there. That is a problem of how we use special operations forces and the conventional military in dealing with special operations forces.

For example, we sent in, it is my understanding, to our forces in the Grenada invasion antiaircraft batteries in broad daylight in helicopters, despite, the fact the special forces are trained to operate at night, to reduce the kind of risks they face in daytime.

How do we explain doing something like that?

Admiral CROWE. They are trained to operate both nighttime and daytime, Senator, depending on the mission, what you are attempting to achieve. The expertise you have at hand dictates what you do.

I am not pretending we did not make any mistakes.

Senator COHEN. A lot of comment has come about saying this is a classic misuse of special operations forces in terms of how we put them in that operation as opposed to utilizing the best skills operating at nighttime.

Admiral CROWE. We are learning a great deal about special operations forces. This is a new item with us. The stress in the last few months has been on account of the terrorism.

We are also factoring them into unified commands with new organizations and new missions. We learned a lot from Grenada and we are profiting from it. We are learning every day.

Chairman GOLDWATER. Senator Levin.

Senator LEVIN. Thank you, Mr. Chairman.

Mr. Secretary and Admiral, welcome to both of you.

Nobody here knows yet whether or not star wars is going to fly, but I know that this budget request is not going to fly. Year after year after year we have authorized less than what you, Mr. Secretary, have requested. For the 1986 fiscal year, the Congress cut your budget request actually below the level of the year before.

Despite these annual cuts in your request, you were able recently to say that our defense recovery is in the home stretch. Just last night the President told us that we are stronger this year than last and we are growing stronger every day. We are militarily strong, as we must be, despite defense authorizations at lower levels each year than have been requested by you, Mr. Secretary.

Now, we recently gave the administration a Gramm-Rudman message about the need to reduce the deficit. Judging from the defense budget that you are submitting today, it does not look as though that message has made it to the right places. You are here to defend a defense budget request which is $33 billion more than last year, this in a year when we are being asked to cut Federal spending by more than $38 billion in order to reduce the deficit.

You are asking for an increase of more than $2 billion for star wars over last year's level, just a $2 billion increase in that program. Last year was almost double what we provided the year before.

That $2 billion increase alone for this year could pay for all of the research that we do in energy resources, the entire rural electrification program or entire effort to provide vocational, adult, and handicapped education, that $2 billion increase, just the increase you are asking us for over last year in SDI.

It is a program that we do not know yet that it will work. We do not know yet that it will be deployed if it is feasible. That $2 billion increase could also be used to prevent the cuts that the administration has proposed of $1½ billion in higher education, over $2 billion in health programs, $2 billion in housing programs.

We could use this huge hike for star wars to avoid the cuts proposed in rural housing, highways, mass transit.

Looked at another way, the administration wants to cut $600 million from veterans' hospital care, $600 million from community development, $300 million from food stamps in order to funnel $2 billion more into the SDI Program.

The increase in that program could more than pay for all of the Federal research into cancer and heart disease, just the increase in one program.

Our deficit problems are not going to disappear with a wave of a magic wand. The facts are that we are being asked to make cuts in very important programs, important to our people. Some 38 billion dollars' worth of cuts in all that are being sought.

We are not going to approve a real increase in defense spending in the face of our absolute need to reduce the deficit for our economic security and strength in the absence of any revenue increase. We are just not going to do it and I think we all know it, as Senator Hart said.

In these circumstances, the issue again is not whether the defense budget request is going to be cut. The issue is where it is going to be cut and by how much.

My first question is for Admiral Crowe relative to the strategic balance.

NUCLEAR PARITY

Admiral, the Joint Chiefs told us last year in their posture statement that there is "rough nuclear parity between the United States and the U.S.S.R."

Is that still true?

Admiral Crowe. Yes; I would agree with that, Senator. Of course, what we are concerned about is the future; that rough nuclear parity could be upset. I think we all should be concerned about keeping parity.

Please bear in mind that there are many categories where the Soviets certainly exceed us in strategic weaponry.

Senator Levin. Are there categories where we exceed them?

Admiral Crowe. Yes; qualitywise, et cetera.

Senator Levin. Overall you were able to say last year in your posture statement that there is a rough nuclear parity with the U.S.S.R.

You would agree we are no worse off relative to the strategic balance this year than we were last year?

Admiral Crowe. In the 1-year timeframe. We are going to be worse off if we do not complete this modernization program.

Senator Levin. I understand.

At least this year we are no worse off than last year?

Admiral Crowe. I would say within the nuclear parity.

Senator Levin. Why weren't these words used in this year's posture statement?

It looks like they were carefully excised. The language where they were included was changed only in that regard to eliminate those particular words, "rough nuclear parity."

If there is a rough nuclear parity between us in strategic systems, why were those words left out of this year's posture statement?

Admiral Crowe. I do not know the answer.

ABM TREATY

Senator **Levin**. Secretary Weinberger, Secretary Shultz has told us that if SDI were to be deployed someday, that, and I am now using his words: "The provisions of the ABM Treaty would have to be changed."

Is your position the same as that of Secretary Shultz or is it different from that of Secretary Shultz on that issue?

Secretary **Weinberger**. I think everybody recognizes that we would have to exercise the amendment rights contained in the ABM Treaty for actual deployment. I do not have any problem with that.

If we are able to develop a thoroughly reliable defense against incoming Soviet nuclear missiles, we should not hesitate for one moment to implement the provisions for notice of amendment and deploy the thoroughly reliable defense.

Senator **Levin**. Would you agree also that those amendments you refer to would have to be negotiated?

Secretary **Weinberger**. No; I think we are entitled to tell the Soviets that our national interest, as provided in the treaty, requires us to proceed now with deployment of a system we feel essential. That is part of the provision of the treaty. That is what I think we should do.

Senator **Levin**. So that we do not have to amend the treaty in order to deploy. We could use the supreme national interest provisions in the existing treaty?

Secretary **Weinberger**. We could. We could also amend if the Soviets were amenable to the negotiations.

Senator **Levin**. So that you do not agree that the provision of the ABM Treaty would have to be changed?

You are saying we could use the existing treaty?

Secretary **Weinberger**. You could do it either way. Either way it would result in a change in the ABM Treaty.

Senator **Levin**. If we exercise the supreme national interest clause? One way to change the treaty.

Would that be a change in the treaty to exercise that provision?

Secretary **Weinberger**. Yes. It would change the result.

I also would like to comment, if I could, Senator——

Senator **Levin**. If I could, I would stick to my questions. You had an hour; I have only 5 minutes.

You talked in your oral presentation about NATO and U.S. expenditures.

NATO/WARSAW PACT SPENDING

My question is this. Do the NATO countries overall spend more than the Warsaw Pact countries?

Secretary **Weinberger**. I do not know, sir, because I do not have any idea what the Warsaw Pact countries really spend. I think it is irrelevant. The question is: What do we get for it?

They get a great deal more than we do. I happen to be interested in the results. The results are that they are getting more than we are and it worries me. I know a lot of races are lost in the home stretch. That is why we have to keep going.

Senator LEVIN. Mr. Chairman, my time is up. Could we keep the record open for questions until tomorrow afternoon?

Chairman GOLDWATER. We will keep the record open as long as it takes.

Senator LEVIN. Thank you.

Chairman GOLDWATER. Senator Quayle.

Senator QUAYLE. Thank you, Mr. Chairman.

I would like to congratulate you and the President for what you have done for national security. There is no doubt you have restored the credibility and respect of this Nation. That is one of the reasons we are where we are today.

Also I would like to point out that you, in fact, have compromised with the Congress over the years. Going back and looking at your charts, since 1981 you have compromised to the tune of $181.9 billion in budget authority.

We will certainly get another resolution. I hope that we realize there are limitations in the amount of compromise. They have certainly been going in one direction recently than what we originally signed off on in 1981. There has been a spirit of compromise.

I am sure we will try to reach within limits and there are limits when we get into the area of national security. We cannot change the threat posed by the Soviet Union.

ABM DEVELOPMENT AND DEPLOYMENT IN EUROPE

Mr. Secretary, I would like to focus on an issue I am very interested in and that deals with the potential ABM developed and deployed in Europe.

In your statement on page 62 you note that the Soviets are replacing their Scud, Frog, and Scaleboard with the SS-21's, -22's, and -23's. These are conventional ballistic missiles that have, according to a hearing we had last week, a tremendous amount of potential against our military assets in Europe. One of the potential initiatives that we discussed was the development of an ABM system that could be deployed in Europe. Unfortunately, you do not go on to talk about that.

Do you support the idea of developing such defenses? Do you think it is worthwhile to work with our allies for ABM potential and, if so, could we get some direction from you and the Department that we ought to focus on this new threat that is being developed?

Our European allies are very aware of it and we are aware of it. I do not find that in your report.

Secretary WEINBERGER. It should be there. It is a very important matter. Our tactical ballistic missile defense is a very important system to develop. We are discussing it in NATO meetings with my colleagues, the Defense Ministers of the NATO countries.

We have, both in the emerging technologies group as well as in others, examined ways in which we can deal with it. It is a shorter range threat of a very real nature. It is part of the need that we have to make conventional defenses more effective against much larger conventional forces.

It is an important part of what we are doing with our NATO allies in trying to work out effective systems.

Senator QUAYLE. I am willing to work with you and others on this particular issue. I am sorry that it is not in that report.

Secretary WEINBERGER. It should have been.

Senator QUAYLE. I look forward to working with you on that.

Secretary WEINBERGER. As long as the report is, we could amend it further and put that in.

Senator QUAYLE. The administration is studying the proportional responses to the Soviet violations. Am I correct?

Secretary WEINBERGER. Yes; we are looking at appropriate proportional responses to the various violations that have occurred and they have been very numerous over the years.

RESPONSES TO SOVIET VIOLATIONS

Senator QUAYLE. Admiral Crowe, do you support the idea we should have appropriate proportional responses to Soviet violations?

Admiral CROWE. I certainly think we should examine it.

Senator QUAYLE. As we examine one of the options, one of the things that is of concern to me is the way we have interpreted the limitation on cruise missiles. Under SALT II it seems we have a limitation of 600 kilometers that refers specifically to their air-launched cruise missiles, nuclear tipped.

If I am correct, we have imposed unilaterally that limitation on conventional cruise missiles as well. I know Admiral Crowe in the past has testified before the committee and others have about the desirability of getting longer range on our conventional cruise missiles.

I am wondering, Admiral Crowe, if lifting the 600-km limit might not be an option that we might want to consider as a proportionate response.

Admiral CROWE. Certainly we are examining all possibilities now.

Senator QUAYLE. Would this be a viable proportional response?

Secretary WEINBERGER. Yes. I do not think there is any particular limitation on the proportionality or the numbers of responses, Senator. We have to be bound by an agreement that we signed. We did not sign SALT II.

We have attempted, as the President has said, to go the last mile in encouraging Soviet compliance. That Soviet compliance is not there. They have broken it in a number of cases, including the SS-25 and building of the Krasnoyarsk radar and various others.

Those responses are not in the nature of a kind of get even sort of thing or revenge. They are responses that would be designed to enhance the strength and deterrence of our own forces. Within that, a suitable increase in the range of cruise missiles to give us the kind of deterrence we need would be perfectly appropriate.

Senator QUAYLE. We could do that now with our conventional cruise missiles and perhaps we could lift the SALT II limits on cruise missile ranges immediately separate from the RSVP process.

Chairman GOLDWATER. Senator Exon.

Senator EXON. Thank you, Mr. Chairman.

Gentleman, thank you for coming this morning.

REAL GROWTH INCREASE OF 3 PERCENT

Mr. Secretary. I would like to continue on from where we left off this morning in our breakfast discussion with you.

I would simply say that this morning, you have made an excellent case for the President's request as you usually do. I compliment you for coming here and expressing your views on how much we need for national defense, a 3-percent real growth increase, given the continuing real threat of the Soviet Union.

What I told you this morning reflected the views of a significant portion of the Congress. I see no way that the Congress, either the Senate or the House of Representatives, is going to meet what you and the President maintain is a minimum position, of a 3-percent real increase with the rigors of the restraints that are placed upon us here in this most difficult time.

I told you this morning that I am a strong backer of national defense and I think you need a 3-percent real growth increase. I would like to be a part of giving that to you.

I am appealing to you, though, on how to go about getting this increase. This probably is not your duty, but above and beyond your duty as a very effective Secretary of Defense is your relationship with the man who lives at 1600 Pennsylvania Avenue. I suggest that there is no member of the Cabinet that has more direct influence and will be listened to more than you.

I told you this morning it was very difficult for me, being from a prime agricultural section in Nebraska, to support a 3-percent real growth increase in defense when Gramm-Rudman has forced a cut of 25 percent for the next 2 years in the commodity program section of the agricultural bill.

I stand corrected. It turns out since I did not have the figures then, it is 24.47 percent rather than 25. I think that is close enough. I guess you would be happy if we could get that close to a 3-percent real growth increase.

Secretary **Weinberger**. We could make that kind of compromise, Senator.

Senator **Exon**. I simply say to you, Mr. Secretary, that up here in the trenches where this is going to be worked out, there is no way, in my opinion, that you are going to get a 3-percent real growth increase unless we have some kind of compromise with the President with regard to additional revenues from some source.

No, do not tax the American family, I heard the President talk about last night. So far as I know, there is no one in the U.S. Senate or House of Representatives, talking about taxing the American family. But there are some sources of revenue that I think we need.

There is no way we are going to have a 3-percent real growth increase in defense, I suggest, unless we can get some kind of compromise out of the White House. I would implore you to do whatever you can in that particular area.

Can you help?

Secretary **Weinberger**. Sir, you are too kind. I certainly will do everything I can to try to get the amount that we are required by world conditions to have for our defense.

My worry is that whenever we have done that—pursued that path of making cuts in our own requests below what we wanted—the deficit has simply increased. My fear is that if we got more revenue, that revenue—to the extent it amounted to a net increase, which I think is problematical if it injured the economy—I do not think there would be any guarantee that it would come to support defense.

So, we are very worried about asking for more revenue on the premise that it will help defense or help the economy. The tax cut that the President put in over a 3-year period produced 42 percent more revenue. The conditions produced a 61 percent increase in expenditures.

I think that is what we have to try to get hold of. I certainly will do the best I can to get the Congress and the people to understand the defense needs that we have that you clearly understand and would like to vote for.

We would like to do what we can to persuade you to vote that way but we do not believe a tax increase is going to lead to that result. We think a tax increase would lead to some larger increases in some of the other spending programs.

A lot of things have been cited. I am familiar with the commodity program, and your estimate of 25 when it is only 24.47 is a greater degree of refinement than we can do. My fear is that if you had the kind of tax increase that people are talking about, or any kind, you would have increases in these other spending programs.

A lot of these cuts that Senator Levin and others mentioned are not really cuts. They are cuts in anticipation of hoped for increases. There is still a very large amount going to those programs.

The short answer is that we will do whatever we can to convince the people and the Congress that the amount we have requested is required, is really less than is needed. We very much hope, since we regard this as a form of fire insurance for the Nation, that we will be spared the fire even if we do not have enough insurance.

Senator EXON. Let me say, if I might, that once again I come back to my central theme, Mr. Secretary, that we need your help in moving the President off what I think is, as a no compromise stand. If he continues in that posture, then it will be he, the President of the United States, that will assume and have to share at least a substantial portion of the burden for not meeting what you and he feel are the minimum defense needs of this Nation.

Thank you very much.

Chairman GOLDWATER. Senator East.

Senator EAST. Thank you, Mr. Chairman.

I realize the hour is late. I will move quickly, Mr. Chairman.

I wish to commend the Secretary of Defense for the excellent job he has done. He stands well in the challenges that are placed before him. I commend him and admire him for it.

I certainly welcome the Chairman of the Joint Chiefs of Staff also.

My question, Mr. Chairman, I would like to direct to the Chairman of the Joint Chiefs of Staff, Admiral Crowe, who has given us a rundown on the strategic position of the United States in the world today and, of course, the whole point of a sound defense budget is to buttress that strategic position of the United States in the overall world equation.

It occurs to me, Admiral, and I will end my question with this and would appreciate your response to it, it occurs to me, Admiral, that we may very well be in a war now, we are in a war and we are losing it. Symptomatic of it is the appearance of Jonas Savimbi from Angola.

In the undeveloped parts of the world the Soviet Union, through her proxies and surrogates in Southeast Asia and Africa, is carrying on a quite successful military operation. It is slow, sometime not so slow. The dominoes fall and in short, the military strategic balance, the geopolitical balance in the world because of the Soviet military success through her proxies, is tipping increasingly against us.

My point is in spite of what we spend, and I agree we need a very strong defense budget, and I would support the Secretary, it occurs to me, though, actually we are losing this war. When we speak of preparation of war, our risk of war, it is somewhat futuristic, obviously, when, as a matter of fact, we are in a third world war and we are losing it in the undeveloped parts of the world, and at some point that balance will tip against us.

What is your thought on that?

Admiral **Crowe**. Senator, I agree we are in a conflict. Whether you characterize it in the normal sense of what we think of as a war or not, we are beleaguered, and hard pressed around the world, because of the Soviet efforts.

They are the world's largest arms sellers. Not only have they heavily supported their satellites and some of their clients, these clients turn out to be troublemakers.

I am not so sure we are losing. We have had some remarkable successes in this contest with the Soviet Union. They have lost some big countries themselves in the process over the years.

What I think they have done is, because of our ability to deter the Soviet Union, because of some of our successes, they have shifted their approach as to how they will attack us; that is, through third country surrogates, small countries, the support of Cuba and Nicaragua.

Senator **East**. Beyond Grenada we have not had success, have we?

Admiral **Crowe**. This is an area where we have to start responding more. We have to do more. We have to get in this contest.

Senator **East**. You feel that we are losing it at this point?

Secretary **Weinberger**. We certainly are not doing well.

Senator **East**. Thank you.

That is all, Mr. Chairman.

Chairman **Goldwater**. Senator Bingaman.

Senator **Bingaman**. Thank you, Mr. Chairman.

BASE CLOSURES

Mr. Secretary, let me ask about base closures. One of the issues that was brought out as part of the debate about waste, fraud, and abuse last year, was the suggestion that part of the problem was that we in Congress resisted all the efforts to close bases.

I think Chairman Goldwater took the lead last year trying to work up a notional base closure list. As I understand what you proposed to us this year, there is no proposal to close any base and in fact there is a proposal to open 15 new bases as part of the Navy homeporting initiative.

My request is: Why we are where we are on this, how can we justify opening new bases and why has Chairman Goldwater's initiative, and I think Senator Gramm also took some lead in trying to have this issue dealt with last year, why has that initiative not worked?

Secretary **Weinberger**. Our new bases are home ports for additional ships voted and authorized and purchased and on the way. I do not know that they are properly described as bases. They are homeporting.

It is to accommodate the new equipment that the Congress has voted.

As far as closures are concerned, we are very strongly for base closures. There are two points to bear in mind.

One is Senator Goldwater took the lead and the committee voted substantial improvements in the base closure process. At the moment it takes 22 to 24 months to close a base, not because of engineering and other problems, involved, but because of the congressional procedures required, notifications of hearings, and so on.

They can actually be delayed 2 or 3 years by any reasonably competent attorney. So, you cannot do it immediately.

What we need is legislation which will give the Secretary of Defense the authority to close the base after notification of 30 to 60 days. Then you can close them.

The thing that is required is a substantial amount of money for relocation costs, closing costs—in some cases the effect of mothballing because you may need them again as we have frequently found we did need them—or the time it takes to settle.

All these things require some additional funds that have to be spent. In the corporate world they would be a good investment, because they would start producing returns somewhere in the neighborhood of 3 or 4 years later and that would be a good investment.

We do not have any money to make that kind of investment for a longer term savings. We would like to close bases, and we would be glad to do so if there could be some form of authorization or appropriation for the money immediately that did not affect other higher priority programs, and which in 2, 3, 4 years could start producing savings.

But an inherent part of it is to get the expediting legislation so that we can close the base in 30 or 60 days and not obstruct the process. It is expensive in and of itself to wait 2 or 3 years to see if we are going to be allowed to do it.

WASTE, FRAUD, AND ABUSE

Senator **Bingaman**. Let me ask on a specific you refer to on page 113 of your annual report. There you also talk about this waste, fraud, and abuse issue and cite as one success the inspector general's efforts to consolidate two supersonic sled tracks.

One, I understand is at China Lake. The other is the Air Force track in New Mexico. I had thought that the Navy's objections to the inspector general's report had won out and that that saving would not be achieved.

I gather from your statement here that you would expect to override the Navy's objections and go ahead with that consolidation.

Secretary WEINBERGER. We would expect to get the savings where indicated. It is indicated there. The Navy's views have been presented and considered. We believe the savings are more important.

Senator BINGAMAN. So that will be part of the 1987 program to consolidate the two?

Secretary WEINBERGER. Right.

Senator BINGAMAN. On page 16 of this same report you have a chart that, as I read it, indicates the United States defense procurement expenditures have exceeded the Soviet procurement expenditures for the last couple of years.

Am I reading that right? Is that a fact?

Secretary WEINBERGER. These are based on the intelligence community's estimate. It shows that our procurement expenditures compared to the estimated dollar cost of Soviet procurement had gone up a bit in the last year.

What you have to bear in mind is the big gap of the previous 12 years in which there was a $300 billion net in favor of the Soviets during all that time.

Furthermore, we never have any confidence, I do not, in estimates of Soviet procurement expenditures because it is so easy for them to hide things and disguise them and put them in different categories, but the intelligence community believes we have in our procurement expenses started to exceed the Soviets in the last year.

The important thing, however, is the output.

Senator BINGAMAN. Your justification is what we need to make up for the neglect in spending in previous years?

Secretary WEINBERGER. It is not neglected spending, it is the fact we did not get the output we needed during those years to maintain credible deterrence. We are getting it now. The idea of trying to take a snapshot as of this morning is very misleading because we have a lot of things in the pipeline.

The Soviets have a lot of things. We do not know whether they have been in the pipeline or not, but every year they are investing in bigger quantities than we are.

MILITARY PERSONNEL REDUCTIONS

Senator BINGAMAN. On page 10 of your testimony you indicate that on May 1 since you have to revert to the obligation limits imposed by the authorization act, you would have to at that time reduce military personnel by over 330,000 active and 176,000 reserve.

Secretary WEINBERGER. Yes.

Senator BINGAMAN. Could you elaborate on that and tell us how you are going to avoid that?

Secretary WEINBERGER. We are going to avoid it. If the Congress will lift that obligation cap, we can make it in the military personnel account.

The other way would be if Congress enacted legislation by May which made reductions in the amount of $2.9 billion in the retirement. We do not recommend the latter.

We have complied with the congressional demand and submitted legislation showing ways in which that could be done. We think it will create great turbulence in the military and interfere with the success of the volunteer plan.

It is part of the compensation package and probably is recognized as such by everyone when they enlist. We have to be careful about that. If Congress will lift the obligation cap, we will not have to do it. If they do not, and May comes on us quickly, we will have to let that number go because our military personnel account will not allow us to make those payments.

Chairman GOLDWATER. Senator Wilson.

Senator WILSON. Thank you very much, Mr. Chairman.

First, Mr. Secretary and Admiral Crowe, let me congratulate you and commend you for your service and for extremely lucid and forceful statements.

Pursuing the line of inquiry advanced by Senator Warner, let me just ask a question for the record.

Do you not feel that in arms control negotiations, relating to strategic weaponry, that in the future there should be explicit linkage with arms control talks and reducing the conventional threat of the Soviet Union?

Secretary WEINBERGER. Yes, I would be delighted.

MANPOWER

Senator WILSON. Let me ask that for the record. Let me ask Admiral Crowe a manpower question.

I think you made a very compelling statement to the effect that the first priority, the most urgent priority, of the Joint Chiefs is to sustain personnel readiness.

Let me just suggest that if Congress does not adopt the President's budget, and I think they should, but they choose instead to fund domestic spending at a higher level, then I think the Secretary is right in making the observation that that will necessitate cuts in manpower in order to achieve the outlay reductions that will be required.

Two questions as devil's advocate and in my capacity as chairman of the Senate Armed Services Subcommittee on Manpower and Personnel.

There are some in Congress who will seize upon your statement as an excuse to salvage research and development and acquisition in order to sustain manpower and readiness.

It is not true that, however unwise this choice, is it not wiser to reduce manpower than research, and development, and acquisition? Can't we mobilize and train manpower more rapidly than we can accomplish necessary research and development and acquisition?

And, second, even within the context of the requirement for manpower cuts, reductions in these outlays, should we not choose the option of retaining the high quality that you so rightly celebrated, and I join you in that, and reduce the numbers rather than reducing the quality?

It seems to me that we cannot go back on the pay and on the benefits, beyond what is perhaps envisioned in the 1985 bill with respect to some change in retirement.

Admiral CROWE. Senator, to take the second part of your question first, yes, I would agree with that. We want to retain quality, we want to keep the precedent we have already set, and we want to keep the contract we have with our people.

I think that is imperative. Without good people, good weapons will not be very good. With good people, you can compensate for a lot of things.

Regarding the first part of your question, personnel I said is our first priority, and I stand by that statement. It does not mean it is an overriding priority over everything else. It is on a case-by-case basis.

I do not know what cuts you are talking about. We would have to make tradeoffs with whatever is under attack. We would make recommendations to the Secretary.

I wanted to make it clear that in making those tradeoffs and forming our advice, the Joint Chiefs of Staff put emphasis first of all on quality of people that is very, very important, whatever forces we have, whatever authorization we have, whatever equipment we have.

As I understand Gramm-Rudman, after this year, we will have no choice, it will be taken across the board on the personnel account, and all other accounts, at whatever the percentage was.

Senator WILSON. Congress, if they can come to a consensus, can obviously alter that proportion of the across-the-board cut. There will be some who will seek to do that in a way that I think would seriously undermine the kind of credibility the Secretary seeks for us and you seek for us as we go to Geneva.

Mr. Chairman, I thank you. I would like to add two additional questions for the record.

Chairman GOLDWATER. You may do that.

Senator Glenn.

Senator GLENN. Thank you, Mr. Chairman.

There are two areas I am concerned about. We have discussed these a bit in the past. I would like to have your comment on these for the record this morning.

JOINT COMMITTEES

I spent 8 years on the Senate Foreign Relations Committee before coming on this committee. It has always concerned me that we never seemed to get together. I recommended in the Congress we put those two committees together because I do not think we can have proper defense for the Nation without considering our long-term options in foreign policy.

We cannot have foreign policy determined solely in a vaccum. It is determined at least in large measure on the basis of what our military capability is. Our defense has to reflect long-term objectives of well thought out foreign policy.

I think the American public, and perhaps we, are impressed something with the fact that we almost get the view the last salesman up the steps of the Pentagon is favorably received rather than what weapon system will be best for the long term.

We are in a very changing world. Our trade patterns have changed in the Far East. We now have more trade with the Far East than our traditional partners. Our NATO alliance have changed a bit. We have Mideast responsibilities. We have seven treaties that bind us to 42 nations.

Those things get out of date. Yet sometimes we do not reflect that. I think we are bound by treaties to defend Cuba and Nicaragua, for instance. That is a little dichotomy there. I think the treaties will show that we technically have to support them.

So, things change over a period of time. What I am asking is, first, we are buying equipment in the military that will last 20 years or more sometimes.

Are we considering what the State Department says and who sets that foreign policy we are trying to carry out with our defense establishment?

It is a long-term thing. We cannot do it on a short-term basis. We have other things coming in as strategic materials.

Where are they going to come from? Where are the geographic choke points of the world where we cannot get transports through the straits of Malacca and what do we view as critical developing areas of the work in the future?

That is a big question that I know we could talk about for hours and hours here.

I would appreciate your comment on that as to how we do that.

FORCE ANALYSIS

Second, another area I am concerned about is that I wish you could come over from the Pentagon and present to the Congress and the committee a force analysis sometime. Your charts show bombers, fighters, tanks, armored vehicles, and yet bombers do not go out and fight bombers.

We have an offensive system and defensive system on each side. I wish you would present it to is in that way so that we can see where we have an advantage, where they have an advantage. Where we have weakness on our side, we can build up that kind of defense.

In other words, force analysis of offense against defense is what wins in combat. It is not bombers against bombers in combat. It is a force analysis of what their offense and what our defense is and vice versa. I wish you would present that sometime.

It is not a criticism of the administration. It is what I have seen ever since I have been in the military. Those are two big areas, how we set our defense posture to carry out the defense posture of this country and how do you tailor that in for your consideration to a 10- to 20-year basis.

And, second, how do you do this force analysis so that we have advantage of some of that thinking. Those are two mammoth areas. I doubt if you can cover it in 5 minutes, but you can try.

Secretary **Weinberger**. We would welcome joint committees and joint hearings on these matters. We do have internally in the administration such discussion and full agreement on the defense needs and foreign policy. Defense needs are based on a very careful joint analysis of the various risks we face, and our defense budget is constructed to meet them.

That is why we have an expansion in the Navy because there are these choke points. A lot of our resources are thousands of miles from our shores, and so are our allies. We need to keep the sealanes open. Those are the kinds of considerations that go into it.

The steps of the Pentagon are littered with the bodies of dead and disappointed salesmen. We do not acquire from everybody everything that is offered. In fact, we frequently have to design things ourselves and try to get them manufactured.

Senator **Glenn**. So, I overstated a little bit there.

Secretary **Weinberger**. There is a real need for consideration of many more factors in the construction of a defense budget. I assure you that internally those are looked at. I think perhaps the fault is not presenting to the Congress the force analysis that you would like. It is all three, but it perhaps is not presented properly.

For example, helicopters and antitank weapons against a tank. A statement was made by Senator Levin, or someone, a few minutes ago that we do not have any more helicopters than we did in 1980. We do not have any more outmoded helicopters. We have received 684 Blackhawks as of the end of fiscal year 1985.

There is, obviously, a possibility of not presenting the problem as clearly as we should. But the force analysis presentation is a very good suggestion. We can do it. We can do it later this year, and we can certainly do it subsequently.

Senator **Glenn**. My time is up.

Chairman **Goldwater**. Thank you, John.

All right, we get to you, Phil.

Senator **Gramm**. Thank you, Mr. Chairman.

The last one you have been waiting on.

I want to join Senator Nunn in recognizing this is your last hearing on the proposed budget before the Armed Services Committee. I would like to say it has been a great honor for me to have the opportunity to serve with you and sit through two of these with you. You have always been a childhood hero of mine, Mr. Chairman, and I appreciate it.

Mr. Secretary, I would like to commend you on your statement and yours, Admiral. I thought they were excellent.

I would like to take my limited time to respond to some of the comments made about the defense budget. There is some advantage to being last and that is you get to hear what everybody says and respond to it.

First of all, since 1983, 80 percent of the actual savings achieved have been in defense, only 20 percent in nondefense. In this last year, while defense spending was cut, agricultural spending, after the sequester order, rose about 31.9 percent. We are spending more money today on nutrition and housing programs for the poor than at any other time in American history.

Now, with all these talks about cuts, I would like to simply remind people as an amplification of what the Secretary said that revenues, because of the strong economy, are growing by $80 billion this year. The major requirement of Gramm-Rudman is that we have to take $40 billion and apply it to the deficit.

What the President has proposed is roughly splitting the other half between defense and nondefense uses. I think if most Americans understood that, they would think that was reasonable.

I agree with the chairman this whole debate about raising taxes is not a debate about defense. I am willing to submit here today that there will not be a serious proposal to raise taxes that is not a part of an equal proposal in the budget to raise nondefense spending by at least that much and my guess is if it follows the historic pattern, domestic spending will be proposed and increased twice the amount of the tax increase.

So, what we are talking about here is hard choices. The choices we have to make on national defense are pretty clear and I think every Member is going to have to vote on it and, quite frankly, I look forward to it because the American people ought to see the choice made.

The American people support balancing the budget and they are about to find out that means hard decisions. For those of us on this committee and the Congress, that is going to mean do you support defense above Amtrak? Do you support defense above the Government running the railroad, Conrail? Is defense more important than legal services? Is defense more important than national endowment for the arts?

I submit defense is. I submit when we are forced to make a final decision, that we are going to make that decision.

I do not have any doubt about the fact that we are not going to see an across-the-board sequester order in October 1985.

There will be a lot of people today who will run out and bury the President's budget, but I submit they are not going to pack the dirt too tight on top of it because, unlike past years, there will not be enough to shoot it down; you will have to come up with an alternative.

I submit a lot of people will be digging it up in the dark, in the night, a couple months from now because they will need it.

I assure you, Mr. Secretary, I am going to support a strong defense, which I have always believed in. I believe that a healthy economy is part of that and that is why I am trying to balance the budget.

I commend your statement, and I support it, and I support your budget.

Chairman **Goldwater**. Thank you very much.

I am not going to ask any questions. I am going to ask you to do some things.

I believe the Gramm-Rudman Act is going to work. I would like to have a report from the Pentagon on the number of personnel and the dollars involved in answering the report requests from the Congress. I think it is way overdone. I think we can chop it down.

[The information follows:]

The fiscal year 1985 Defense Authorization and Appropriation bills and their accompanying reports imposed 458 reporting requirements on the Department of Defense. To accomplish these requirements, we estimate that 5,200 people were involved in some aspect of their final submission with a total of 377,300 man-hours (181 man-years) of in-house effort, for an estimated cost of $6.7 million. In addition, some reports were prepared with contractor assistance at an estimated cost of $11.5 million. The total in-house and contract cost is an estimated $18.2 million. (This data was collected in November 1985 on a one-time basis estimating effort expended on reports completed at that point and using projections for those reports in process.)

Chairman **GOLDWATER**. This year, instead of relying upon last-minute introductions of amendments for the National Guard and Reserve, I want the National Guard and Reserve situation to be discussed as all other divisions of the military are discussed. I mean that.

We will not entertain amendments at the tail-end that add billions of dollars.

Secretary Weinberger, I would like to have a list of bases that you want to close and can close. I do not need them this afternoon, but maybe tomorrow morning.

[The information follows:]

THE SECRETARY OF DEFENSE,
Washington, DC, February 10, 1986.

Hon. BARRY M. GOLDWATER,
Chairman, Committee on Armed Services, U.S. Senate, Washington, DC.

DEAR MR. CHAIRMAN: During my testimony before the Senate Armed Services Committee you asked me to give you the names of some bases that we are ready to close.

It is important that we know that the Congress is as serious about providing the legislation and funds we need as you and I are about closing bases. Once installations are cited as candidates for closure, there is considerable disruption on the bases themselves and within the local communities. The announcement is particularly demoralizing to the people who carry out important Defense activities on the base.

Nevertheless, to demonstrate that I am serious about improving our base structure, I will cite a few installations we can use to determine the will of Congress on this matter. The bases are:

Army Materials Laboratory, Watertown, Massachusetts.
Naval Hospital, Philadelphia, Pennsylvania.
Lowry Air Force Base, Denver, Colorado.

In order to close bases with a minimum of delay, I ask that Congress pass legislation that would: (1) Authorize me to close or realign any military installation, within 45 to 60 days, without regard to any other provision of law that would prevent or delay such action, including the National Environmental Policy Act, any restrictions on the disposal of real property, and any restriction contained in any appropriations act on the use of funds to close or realign any military installation; (2) appropriate to the Defense Department additional funds to carry out closures and realignments; and (3) exempt the actions of Federal officers and employees in closing or realigning bases from review by Federal courts.

I am prepared to close the bases I have identified here if Congress will enact the necessary legislation and provide $300 million to pay the up-front costs.

Sincerely,

CASPAR WEINBERGER.

Secretary **WEINBERGER**. They are still there, Senator, from the time I was at OMB. So, it will not be hard to do it. We got them over last year and we have more we can get over this year.

Chairman **GOLDWATER**. You did not get them over here in the form that we could act on them. The strategy that you talked about is a very important matter. I just finished a trip around the world and almost without question, wherever I went I was asked the question, what is your strategy?

I do not think we have any. I think it is high time that we sit down with the military and the State Department and find out what our general strategy is. I think we have to be more in keeping with the generous side of our nature with Taiwan, with Jordan, and with the Saudis.

This is a changing world and we are not going to get very far if we do not recognize it. I happen to feel the Bradley fighting vehicle is a good weapon. I happen also to feel that any weapon that is exposed to fire from the side becomes a vulnerable weapon.

I have driven that weapon. I have fired that weapon. I think it is good in spite of what some Members of the House seem to feel about it. I would like to have some good answers on that.

I would like to have an up-to-date report on the 120-millimeter mortars and also howitzers. It is my understanding that the Army, and the Marine Corps have enough of these to go to war. We did not have enough of them in Korea to amount to you know what.

[The information follows:]

Secretary **Weinberger**. The Request For Proposal (RFP) for the 120mm mortar system was given to all interested parties on November 15, 1985. Bidders are expected to deliver Non-Developmental Items mortars for testing and their bid proposals on April 15, 1986. The competitive shoot-off for the mortars that qualify begins in early May 1986 and extends to August 1986. Source selection announcement for the winning mortar system is expected on August 21, 1986.

The M119 105mm towed howitzer (formerly the L119 British Light Gun) successfully completed its Operational Test II (OT II) in July 1985. It demonstrated a Mean Time Between Operational Mission Failure (MTBOMF) five-fold that of the presently fielded M102 towed 105mm howitzer. As a result, the Army type classified the weapon standard and ready for production in December 1985. Fiscal Year 1987 is the first year of production with a quantity sufficient to field the initial division, which is the 7th ID in California.

The M109 Howitzer Improvement Program (HIP) provides a unique opportunity for the Army to deploy a field artillery force that can match its potential enemy. The HIP integrates subsystems into an effective fighting vehicle. With FM109 HIP, the field artillery can operate widely dispersed, firing with an increased rate of fire. Proposed modifications to the M109 howitzer include: Upgrade of existing cannon tube or a new cannon tube with the same ballistic characteristics as the M198 howitzer to provide compatibility with all current and projected 155mm howitzer ammunition; a new loading system for increased rates of fire to service more targets during surge periods; improved communications, increased automotive reliability, position location and ballistic computation systems, improved NBC protection, ballistic protection and increased ammunition storage capacity. The current program will modify 1700 of the 2400 vehicle M109 fleet.

The M198 towed 155mm howitzer is currently fielded in active and selected reserve component units. The Army plans on procuring an additional 111 howitzers beginning in Fiscal Year 1988 to modernize additional National Guard Field Artillery battalions.

Chairman **Goldwater**. I would suggest to the Navy that they be very careful about recommending any more battleship reactivations.

Senator **Warner**. There is always the U.S.S. *Arizona*.

Chairman **Goldwater**. I am interested in the total civilian force as it applies to the Pentagon. I think it is 87,000 when you add it all up. We are going to try to help you cut that down.

In closing, Mr. Secretary and Mr. Chairman, the purpose of this committee is to provide money for the defense of the freedom of this country. In spite of what some people might think about the impossibility, I would suggest that we felt that way last year and we did fairly well, not as good as we could.

I would like to see us give Gramm-Rudman a chance. If it works, it is going to be good. If it does not work, it will be good.

Finally, to put a monkey on the backs of a bunch of Congressmen who do not have the plain courage to make cuts where cuts should be made. As long as I am chairman of this committee, as long as we have this good committee, and it is the best committee I have ever served with, I think we can all say we are going to defend our interests in achieving the type of defense that this country should have, deserves, and needs.

I have nothing else to say. I will allow other questions to be asked by other members, if you gentleman care to stay.

I personally want to thank you for coming. You have been patient, you took a long time. You answered the questions.

Does anybody else have any questions?

Senator **Warner**. Could you make a 2-minute rule?

Chairman **Goldwater**. Go ahead. Take 20 minutes if you need it.

TERRORISM

Senator **Warner**. Gentlemen, the subject of terrorism. I have followed with great interest the expression of viewpoints by the Secretary of Defense and the Secretary of State. There seems to be some divergence of viewpoints.

Admiral Crowe, if you were invited in, and I am certain you would be at such time as the President was receiving counsel from the Secretary of Defense and Secretary of State, which posture would you take?

I view Mr. Weinberger's posture, which, incidentally, is the one with which I personally agree, namely, that you have to have a very positive and direct causal chain between the incident and the perpetrators of the incident before the justification for the use of U.S. military power.

How would you advise the President, in general, on the use of U.S. military power in connection with terrorist atrocities?

Admiral **Crowe**. Senator, in all fairness, this is not a copout, but I would like to know a lot more about the scenario.

Senator **Warner**. I understand that, but they are generally fundamental. As the Secretary pointed out very clearly, he desires to see a very clear causal chain between any perpetration of terrorist acts and the perpetrators.

Am I not correct, Mr. Secretary?

Secretary **Weinberger**. That is correct.

Admiral **Crowe**. I think there should be a connection, and it should be firm and clear in some fashion.

I think also you should have a pretty good idea that whatever you are proposing to do, you are better off when you have done it than you were before. That implies you should think about not only the act of retaliation, but also the future impact.

I have agreed with what I have seen thus far throughout the administration, the way they are dealing with it.

Senator **Warner**. Would you characterize, then, your approach to this as a very cautious and prudent use of forces?

Admiral **Crowe**. I would not use those words, no. I would use the word "rational."

Senator **Warner**. Thank you very much.

Now, quickly to another question.

COMPREHENSIVE TEST BAN TREATY

Would you provide the committee with your assessment of the effect that a comprehensive test ban treaty would have on international and national security?

Admiral **Crowe**. You want me to provide that, sir?

Senator **Warner**. I would like to hear it now because we are about to start our hearings on the strategic force posture. That is an important element.

Admiral **Crowe**. Obviously, a comprehensive test ban would have wide impacts on what we do, Senator, as long as we are relying on nuclear weapons, and we view that as part of our fundamental strategy.

I think it is important that we pursue a vigorous test program to keep the weapons effective, not only for their effectiveness, but for the safety aspect of the program. I think this is widely overlooked by the public when doing nuclear testing.

Senator **Warner**. The cessation of that program at this time you believe would be detrimental?

Admiral **Crowe**. It would have a detrimental impact that would have to be weighed against the pluses we see in the overall equation.

Senator **Warner**. What priority do you individually, or speaking for the Chiefs, if you can, attach to the resumption of Asat testing and developing of U.S. Asat capability?

Admiral **Crowe**. I think from a purely military perspective, it is imperative that we resume. We are giving the Soviets such an asymmetrical advantage there that I do not see how we can afford to keep it up.

Senator **Warner**. I have followed from the very inception the development of the Trident Program, commencing when I was in the Department of the Navy.

E-6A TACAMO PROGRAM

I am concerned about the communications aspect and in particular the E-6A TACAMO Program of which I have been a strong advocate for the past several years. My understanding of the current budget is that it contains funding to continue that program.

Would you tell us the priority that you would attach to that item remaining in the budget?

Admiral **Crowe**. A very high priority, Senator. I felt that way not only in my present position, but also when I was CINCPAC. We have vast reaches in the Pacific where we need to be able to communicate with these ships and to use the full effectiveness of the new submarines. We need it.

We need it for a lot of reasons, but that is the basic reason.

Senator **Warner**. Thank you.

Chairman **Goldwater**. Anybody else have a question?

Senator **Exon**. Mr. Chairman.

I believe it is true, Admiral, in answer to the question by Senator Warner we are buying three of those aircraft this year and three projected in the budget for next year.

Is that correct?

Secretary WEINBERGER. Three in this budget and we believe three would be desirable next year. Of course, we will have to see what happens this year, but they are a very high priority of the Admiral.

Senator EXON. It seems to me we had difficulty with them on that in the conference with the House.

Senator WARNER. We put them back. I think the Senator helped to put them back.

Senator EXON. Mr. Secretary, if there had not been a shield against a manpower cut in the 1986 cut, how many people would you have had to reduce?

Secretary WEINBERGER. 280,000 by last week.

Senator EXON. Maybe you will have to supply this for the record, but supposing there was zero increase in the defense budget this year and since they are not shielded, what would that figure go to? Do you have that?

Secretary WEINBERGER. I do not really know because we would have to look at whether or not a Gramm-Rudman sequester was going to occur. If the Gramm-Rudman trigger was pulled and we had to go down all the way—the percentage increase this year, as you know, is 4.9, we have to take everything down 4.9 percent. If we had not been able to shield military personnel, that would have meant a reduction of 280,000.

Next year it is just zero and other things are such that you do not pull the trigger, first of all, we could not give any salary increases.

Second, we would probably have to lose some even there because when you have a zero increase the second year on top of a first year zero increase, you have to look at things that outlay as fast as the reduction. Manpower is, of course, in that category.

It would probably be in that range and a very serious loss.

[The information follows:]

The extent to which the Gramm-Rudman Act will trigger automatic spending cuts in fiscal year 1987 depends largerly on the actions of Congress. The President's budget meets the fiscal year 1987 Gramm-Rudman deficit target of $144 billion. Under this budget, there would be no need for cuts in military personnel.

If automatic cuts were triggered in fiscal year 1987 under Gramm-Rudman, they would take the form of an across-the-board uniform percentage reduction in DOD budget authority. Without knowing what that percentage would be, I cannot estimate the impact on military personnel strengths.

Senator EXON. I was interested in your statement, Admiral, that the Soviets now have ability to fight a war in the West and in the East simultaneously.

Admiral CROWE. That is right.

Senator EXON. Given that scenario and given the present naval forces, both of the Soviet Union and its allies and the United States and its allies would we prevail?

Admiral CROWE. You mean in the entire world?

Senator EXON. I am talking about in the Pacific. I am trying to measure our strength in the Pacific. I have generally felt that, given the better balance of strength that we have as opposed to their number of vessels, that we could prevail in the Pacific.

I am wondering if that is still true, in your opinion?

Admiral **Crowe**. They have been improving and increasing their forces in the Pacific considerably in the last few years.

Senator **Exon**. I know, Admiral.

My question is, once again, given the current situation, who would prevail, in your view?

Admiral **Crowe**. In a general conflict in the Pacific?

Senator **Exon**. Yes.

Admiral **Crowe**. My statement which I used to make as CINCPAC, Senator, in the days of the 1970's, was that we were very concerned and I used to say that we did not believe that in a general hostility that we could prevail.

Due to improvements made in the last 4 or 5 years, that situation has changed. I thought the situation was too close to call, but it was likewise too close for the Soviets to call as well.

It would depend a great deal on how the scenario developed and if we could take advantage of some strategic levers we would hope to develop.

Senator **Exon**. Do I interpret you as saying that bascially the forces are essentially equal and it would depend on how the scenario unveiled and what moves were made?

Admiral **Crowe**. That is correct. And how skillful we were. I also think it suggests if we want to look to the future with confidence, that we are going to have to continue to look to our defenses.

Senator **Exon**. Thank you, Admiral.

Thank you, Mr. Secretary.

Chairman **Goldwater**. Gentlemen, some of the members of the committee have additonal questions for the record which we will appreciate receiving your answers.

[Questions with answers supplied follow:]

Question Submitted by Senator John Warner

Senator **Warner**. Secretary Weinberger, in testimony before the Strategic Subcommittee last fall, administration officials indicated that continuing to pursue the SDI Program according to the restrictive interpretation of the ABM Treaty would cause the program to cost more, take longer, and would result in reduced confidence in the results of the research.

Has the Department of Defense made progress in quantifying these implications as requested by committee members?

Secretary **Weinberger**. In view of the importance of the SDI program, the Department is attempting to determine the full implications of the restrictive interpretation of the ABM Treaty on it. While much progress has been made, more work remains to be done. When this work is completed and our understanding of the implications is complete, the results will be made available to the Congress.

Questions Submitted by Senator Dan Quayle

ARMS CONTROL

Senator **Quayle**. Mr. Weinberger, on page 83 of your report to Congress you note that the United States must consider proportionate responses to continued Soviet noncompliance to existing arms control agreements.

For the record, this part of the report, as well as the report as a whole, was coordinated with the State Department and the NSC; was it not?

Secretary **Weinberger**. The Department of Defense Annual Report to the Congress was coordinated with the State Department and the National Security Council, among others. They had an opportunity to review, and comment on, drafts of the Annual Report.

Senator QUAYLE. On January 28th Congressman Fascell received a letter from the State Department that stated that:

"Our position on SALT II is . . . (that) we will live under its agreements and not violate them."

This letter was published in the Congressional Record on the 29th of January and it was argued that it proved that:

"The Administration has wisely rejected the ill-advised counsel of the Department of Defense to respond to Soviet violations of SALT II with United States violations of that Treaty."

Is Congressman Fascell correct in arguing that the Administration has decided to reject the concept of proportionate response?

Did you or your Department see or approve the letter that Congressman Fascell received?

Secretary WEINBERGER. Congressman Fascell was incorrect. The administration has not rejected the principle of proportionate responses to Soviet violations of arms control agreements. Indeed, the State Department's letter reaffirmed that principle.

The President's decisions of 10 June 1985 and 27 May 1986 clearly explain U.S. Government policy on appropriate and proportionate responses to Soviet arms control violations.

The 10 June 1985 decision to "go the extra mile" by dismantling the USS *Sam Rayburn* as the seventh Trident, the USS *Alaska*, went on sea trials, demonstrated the American attempt to establish an interim framework of mutual restraint until a START agreement emphasizing significant, equitable, effectively verifiable and stabilizing reductions could be negotiated to replace the flawed SALT structure.

The President established the following criteria to be used to establish Soviet reciprocity in mutual interim restraint: (a) progress in the nuclear and space talks in Geneva; (b) positive, concrete steps to correct their arms control noncompliance; and (c) reverse or substantially reduce their unparalleled and unwarranted military buildup. U.S. interim restraint policy has always been conditioned on Soviet reciprocity.

Unfortunately, the Soviets have failed to exercise comparable self-restraint and have continued their policy of arms control noncompliance, which has greviously undermined the SALT framework. As the President has observed, the Soviet Union's pattern of arms control behavior fundamentally questions "the integrity of the arms control process itself."

Thus, on May 27, the President decided that in the future, the United States must base decisions regarding its strategic force structure on the nature and magnitude of the threat posed by Soviet strategic forces and not on standards contained in the SALT structure, especially in a flawed SALT II Treaty which was never ratified, would have expired if it had been ratified, and has been violated by the Soviet Union.

The U.S. will remain technically in observance with the terms of the SALT II Treaty until the U.S. equips its 131st heavy bomber for cruise missile carriage near the end of this year. The President has stated he intends to deploy heavy bombers fitted with cruise missiles beyond the 131st aircraft as an appropriate response without dismantling additional U.S. systems as compensation under the terms of the SALT II Treaty.

In summary, responding to Soviet arms control violations through appropriate and proportionate means is an essential element in U.S. arms control policy. Being serious about arms control means being serious about enforcing compliance once violations are discovered.

RESPONSE TO SOVIET VIOLATIONS

Senator QUAYLE. Admiral Crowe, does the JCS endorse the general concept of proportionate responses to continued Soviet violation of existing arms control agreements?

Admiral CROWE. Yes. I believe an appropriate and proportionate response to Soviet non-compliance is necessary. Soviet unwillingness to comply with their current commitments undercuts our on-going negotiating efforts and merits a response to make it perfectly clear that we will not accept a dual standard of compliance.

Senator QUAYLE. Admiral Crowe, last year you stated for the SASC record that extending the range of our conventionally armed cruise missiles "is desirable" and "particularly important in the context of trade off between penetration distance and standoff distance" and that "greater TLAM/C range would within practical limits proportionately reduce their risk of losing launch platforms without decreasing the number of targets which could be attacked." Yet, when asked both Navy and Air Force representatives last year said that they were not extending the range of conventional cruise missiles and that one reason why was the SALT II limit on cruise missiles with ranges in excess of 384 miles. Has JCS given any thought to lifting this self-imposed cruise missile limit as one of the proportionate responses to continued Soviet violations of existing arms control agreements?

Admiral **Crowe**. The Joint Chiefs of Staff have no self-imposed cruise missile limit. As you are no doubt aware, the limitation on deployment of cruise missiles capable of a range in excess of 600 kilometers on sea-based launchers (or on land-based launchers) was contained in the Protocol to the SALT II Treaty, which has expired, and which neither the United States nor the Soviet Union recognizes as limiting current forces. Additionally, it is not apparent that extending the range of conventional cruise missiles is an appropriate and proportionate response to Soviet non-compliance to date.

SELF-IMPOSED LIMIT ON CONVENTIONAL CRUISE MISSILES

Senator **Quayle**. Mr. Weinberger, has DOD considered lifting this self-imposed limit on conventional cruise missile ranges as a proportionate response to Soviet arms control violations?

[Note Well: Ironically, there are no range or number limits DOD places on nuclearly armed sea-launched cruise missiles].

Secretary **Weinberger**. Sea-launched and ground-launched cruise missiles were only limited in the Protocol to the SALT II Treaty. With the expiration of the Protocol after December 31, 1981, the limitations on sea-launched and ground-launched cruise missiles with ranges over 600 kilometers ended. Neither the Soviet Union nor the U.S. Government is constrained by the expired SALT II Protocol.

The TLAM/C version of the Tomahawk sea-launched cruise missile has already been flight-tested and deployed with a range of greater than 600 kilometers.

Senator **Quayle**. Mr. Weinberger, you note on page 62 of your Report to Congress that the Soviets are replacing their SCUD, FROG and SCALEBOARD missiles with more accurate SS-21s, -22s, and -23s. Yet, nowhere in the report is there any specific discussion how we intend to cope with this emerging conventional ballistic missile threat. Does DOD have a comprehensive plan for passive defenses for our forces and allies in Europe? Does DOD support development of an Anti-Tactical Ballistic Missile system? Has it established a program element specifically dedicated to developing an ATBM?

Secretary **Weinberger**. The Department of Defense strongly supports the development of an effective counter to the growing conventional, chemical and nuclear threat posed by Soviet shorter-range ballistic missiles. Thus the Defense Guidance calls for work on defenses against Soviet shorter-range missiles, and in 1982 the Deputy Secretary of Defense approved the "Justification for Major System New Start (JMSNS) for an Anti-Tactical Missile Capability", which states: "A need exists to counter the increasingly sophisticated Tactical Missile (TM) threat to NATO forces. The need includes the functions of detection, identification, early warning, suppression of TM launch and active defense against in-flight TMs. This includes active and passive countermeasures taken to neutralize the TM threat."

There are some passive measures, like increased mobility, dispersion, and proliferation that can and are being taken with respect to some important Europe-based NATO assets to improve their survivability against attack from these new Soviet missiles. However, many assets simply cannot be adequately protected only by passive defense measures. That is why we and several of our NATO allies are interested in exploring the potential of ballistic missile defenses to counter this serious threat. Not only is the SDIO examining this issue, but a number of our NATO allies also are looking into the possibility of ATBM development work to provide future defensive options.

IMPROVE MISSILE GUIDANCE SYSTEMS

Senator **Quayle**. Mr. Weinberger, in Chapter E of your Report to Congress, "Preparing Tomorrow's Forces," you correctly note that one of the 20 most important basic technology areas is Guidance Technology, where the U.S. has a lead over the Soviets. Last year and the year before you testified that improving the accuracies of our cruise and ballistic missiles was a top DOD priority yet again this year there is not one page, paragraph or sentence devoted to explaining how DOD intends to improve the accuracies of future missiles (beyond those systems now being debated—

MX, Trident, SICBM). Does DOD have an overall strategy to improve our missile guidance systems.

Secretary **Weinberger**. The Air Force presently has a multi-year guidance development competition on-going in support of the new Small ICBM. Since the Small ICBM is expected to be deployed in the mobile configuration, this program is primarily focused for technology to support mobility. The Air Force is conducting extensive competitive technology on a modified Advanced Inertial Guidance System (MOD AIRS), the system so successful to date with the Peacekeeper missile; two Ring laser gyroscope designs; and a steller-inertial measurement unit (SIMU), the guidance system designs predominantly used on the U.S. sea launched ballistic missiles. It is envisioned that such a structured, competitive guidance system development program will produce the most capable and cost effective guidance system that the Air Force can deploy on the Small ICBM.

Questions Submitted by Senator Pete Wilson

U.S. STRATEGIC AIRLIFT CAPABILITY TO SUPPORT U.S. GLOBAL COMMITMENTS

Senator **Wilson**. Mr. Secretary, there are several measures of adequacy to meet commitments that we here in the Congress look to seriously as a yardstick of our credibility . . . Among these are days of sustain-ability in NATO . . . Numbers of troops in theater, etc. Do you still see the Air Force 66 million ton miles a day of airlift as a firm requirement and one that is a useful indicator of the credibility of our commitment to NATO? In your opinion would deliberately backing away from this objective constitute a decrease in the creidibility of our commitment to NATO?

Secretary **Weinberger**. As a result of the Congressionally Mandated Mobility Study completed on 30 April 1981, the Department of Defense determined that 66 million ton miles per day (MTM/D) of strategic airlift would be needed if the US were to be able to honor its global commitments. By the end of FY1987, we will have reached a level of 46 MTM/D, and by FY1989, when the 50 C-5Bs will have entered operational service, we anticipate reaching about 47 MTM/D. Despite the fact that our projected FY1989 airlift capability will still be 19 MTM/D short of our established goal of 66 MTM/D, we foresee nothing to cause us to fall off of this objective; our global commitments have not decreased. It is expected that with the acquisition of 188 C-17 aircraft, we will be able to reach the 66 MTM/D target capability by FY1998.

Any reduction in our stated goal of 66 MTM/D could be perceived by our NATO allies as a defense in the US willingness and capability to reinforce NATO should the US have to allocate its limited airlift capabilities to more than one theater simultaneously. Such a decrease could also call into question the US ability and desire to support its global commitments generally.

STRATEGIC MODERNIZATION PROGRAM

Senator **Wilson**. Mr Secretary, as we look to the outyears of our Strategic Modernization Program we see a large bow wave in two or three years with the procurement of the D-5, procurement for the ATB, procurement for the Small ICBM, procurement for the ACM and, depending on your point of view. . . procurement for the MX and procurement for the SDI. Are we going to be able to afford all these strategic systems and are you satisfied that each of these meets stringent cost effectiveness critieria?

Secretary **Weinberger**. It is true that, as planned, a large share of the investment costs for strategic modernization will come due in the next four to five years. Nevertheless, total spending for modernizing, operating, and maintaining strategic forces will not exceed 15 percent of the DOD budget in any of those years.

As for cost effectiveness, every program in the strategic modernization package has been designed to keep costs as low as possible while providing required deterrent capability. For example, every major component of the SICBM—propulsion, guidance, and mobile launcher—has been subject to intense contractor competition; competition for the guidance system alone is likely to result in significant savings. Three contractors competed vigorously for the Advanced Cruise Missile contract, and the resulting design is very cost-effective. The Trident II (D-5) submarine-launched ballistic missile has much greater payload and accuracy than the C-4 it will replace, but at an affordable cost maintained through the use of competitive procurement strategies. The Strategic Defense Initiative is a research project that by its very design will produce the most cost-effective defense from among numerous competing concepts.

QUESTIONS SUBMITTED BY SENATOR JOHN STENNIS

NATIONAL GUARD AND RESERVE

Senator STENNIS. Mr. Secretary, the last several years have seen our National Guard and Reserve Forces persistently received a very small percentage (roughly 6 percent) of the overall Defense budget, even as their roles and missions are expanding. The Congress has shown their recognition of the significance of the Guard and Reserve by recent efforts to add additional money to its budget. Please provide for the record the total amount proposed, by account, for the Guard and Reserve in the FY 1987 budget request, including any new initiatives. Also, please provide for the Committee how this year's budget request for the Guard and Reserve compares to what has been proposed for each of the last five years.

Secretary WEINBERGER. Our fiscal year 1987 request for the Reserve Component Military Personnel, Operation and Maintenance, Military Construction appropriations and new procurement for the Reserve Components as contained within the various Service procurement requests, is $19.3 billion. The breakout by account is as follows:

	Billions
Military personnel pay (includes $2.4 billion for retired pay accrual)	$9.5
Operations and maintenace	6.5
Military construction	.5
Guard and Reserve procurements	2.8

Since prior to the fiscal year 1985 budget, the procurement request portrayed only total force requirements by service, new procurement funding for the National Guard and Reserve was not separately identified except in a very limited and general sense. Thus, in response to your question regarding what has been proposed for the National Guard and Reserve prior to fiscal year 1985, only what was originally requested for the Reserve Component Military Personnel, Operations and Maintenance, and Military Construction appropriations is provided. The totals for those appropriations are as follows:

Fiscal year:	*Billions*
1982	$8.2
1983	9.9
1984	10.6
1985	14.3
1986	15.7

NOTE.—Retired pay accrual funds were placed in Reserve Component military personnel budgets commencing in FY 1985 . The FY 1985 estimate above contains $2.0 billion for retired pay accrual, and the FY 1986 request contains $2.2 billion.

Beginning in fiscal year 1985 we began to separately identify the Reserve Component portion of the service procurement requests, and that information is being provided to the Congress. In fiscal year 1985, in addition to the funds already indicated, we initially requested $1.7 billion in new procurement for the Reserve Components. This request grew to $5.8 billion, reflecting funds added by the Congress and some readjustments within the Department. In fiscal year 1986, Guard and Reserve procurement requests totalled $4.0 billion. This estimate has now grown to $5.1 billion.

Our fiscal year 1987 program continues to stress the contribution of the Reserve Components to the Total Force. In addition to the increases in personnel requested, we are moving forward with our initiatives for enhanced training and the accelerated systematic modernization of the Reserve Components. For example, we will continue to modernize the Army National Guard and Reserve tank fleet with M1 and M60A3 tanks. In addition, the Army Reserve Forces will receive sixty additional AH-1 COBRA and seventy-nine additional UH-60 BLACKHAWK helicopters in FY 1987. We plan to add three more FFG-7 class frigates, one FF-1052 class frigate and one MCM-1 class ship to the Naval Reserve. The tempo of ship operations will also increase significantly in FY 1987 from fifteen underway days per quarter to twenty-one days, to provide more operational training for Reserve ship crews. In addition, the Naval Reserve is retiring older F-4s and A-7B aircraft and replacing them with newer F-14 and F/A-18 aircraft. Thirty F-15 and sixty F-16 fighters will be provided to the Air National Guard. The Air Reserve Force will also be given eight C-5 and twelve C-141 aircraft to enhance its organic strategic airlift capability.

Senator STENNIS. It is my understanding, Mr. Secretary that the strengths proposed for the Guard and Reserve Forces are 52,000 above the levels approved in

Fiscal Year 1986. How will these extra personnel be utilized and are there additional responsibilities being delegated to the Guard and Reserve that require this increase?

Secretary WEINBERGER. The Reserve Component's manpower strengths are growing both from the assignment of additional missions and from increased manning of existing structures. The focus of these increases is in improved readiness and in modernizing force structure. They reflect the continued increased reliance on the Guard and Reserve and are possible because of improved retention and vigorous recruiting by the Reserve Components. Manning against wartime requirements continues to improve. Additional Reserve component missions for the Army National Guard include the activation of combat aviation brigades, attack helicopter battalions, two MASH units, and combat support and service support units. The Army Reserve will activate or convert aviation units and combat support and combat service support units. The Naval Reserve will add four more frigates and their support units to its force. The Marine Corps Reserve will activate a light armored vehicle battalion and medical support units. The Air Reserve Forces strength increases will support the build of C-141 and C-5 aircraft, and aerial port personnel will increase, to support wartime surge requirements for the growing strategic airlift force.

SHIPBUILDING

Senator STENNIS. Mr. Secretary, I believe the record is clear that I am a strong supporter of the efforts to maintain progress towards a modernized 600-ship Navy. My concern lies in the fact that the Shipbuilding and Conversion account's share of the overall Defense budget has been decreasing—not increasing—at the same time we are striving towards the goal of 600 ships. In fact, this year's SCN budget request is less than the amount appropriated for the same account in FY 1984. In view of this, Mr. Secretary, is this year's SCN budget request of roughly $11 billion adequate to meet our needs and requirements to reach our goal of a 600-ship Navy?

Secretary WEINBERGER. Yes. The FY 1987 Budget Request for $11.046 billion represents our best judgement of the funds required to procure a balanced mix of ships to enable us to carry out the maritime strategy and existing operation plans. We will reach 600-ships when the ships presently under construction join the Fleet. The ships included in this year's request will modernize and sustain the 600-ship Navy in the 1990's.

QUESTIONS SUBMITTED BY SENATOR CARL LEVIN

ABM TREATY

Senator LEVIN. Do we still consider ourselves bound by the ABM Treaty despite evidence of Soviet violations of that Treaty?

Secretary WEINBERGER. The President has made it clear that U.S. programs are, and will continue to be, in compliance with our obligations under the ABM Treaty. The President has also made clear that we remain deeply concerned over Soviet violations of the ABM Treaty. One of our priority objectives remains to have the Soviet Union return to compliance with its obligations under this Treaty. The President's December 1985 report indicated that the illegal construction of the ballistic missile detection and tracking radar at Krasonyarsk, and the combination of other Soviet ABM-related activities involving missile mobility, testing, rapid reload, etc., suggest that the Soviets might be preparing an ABM defense of their national territory, which is prohibited by the ABM treaty. Such an action, if left without a U.S. response, would have serious adverse consequences for the East-West balance that has kept the peace.

Senator LEVIN. Does that Treaty place limits on the deployment of SDI? I'm not asking about research or development, only deployment.

Secretary WEINBERGER. SDI is a research program designed to address fundamental questions about the technical feasibility of defenses against ballistic missiles. We do not have any preconceived notions about the defensive options the research may generate. We will not proceed to deployment unless the research indicates that defenses meet strict criteria.

Under the ABM Treaty, the U.S. is allowed to deploy traditional ABM systems, i.e., no more than one hundred ABM launchers and interceptor missiles in an ABM system deployment area.

If at some future time, the United States, in close consultation with its allies, decides to proceed with deployment of defensive systems that are proved feasible by

SDI research, we intend to consult and negotiate as appropriate with the Soviet Union as provided for in the ABM Treaty.

Senator Levin. If so, are we willing to negotiate any further limits on deployment?

Secretary **Weinberger**. The deployment of a fully-effective defense against ballistic missiles is already prohibited by the ABM Treaty. Therefore, further limits on deployment are not necessary.

Senator Levin. Do you agree with Ambassador Nitze that on the whole the ABM Treaty has been a useful and equitable accord?

Secretary **Weinberger**. We signed the ABM Treaty in 1972 on the basis of two major assumptions: 1) that ballistic missile defense technologies available at that time could not support an effective defense; and 2) that limits on ballistic missile defenses would be followed by—and only be acceptable with—sharp reductions in offensive forces.

Unfortunately, these assumptions have proven to be unfounded or have eroded with time. First, the Soviets have worked aggressively at reducing their vulnerability to our deterrent forces. Second, new and emerging technologies now offer the promise of effective defenses against ballistic missiles. Third, the Soviets now have approximately four times the number of nuclear weapons they had in 1972, and have not agreed to an arms reduction accord that would reduce present levels—let alone reduce nuclear forces below the levels in place in 1972.

STRATEGIC DEFENSE INITIATIVE

Senator Levin. Last week in a briefing for Senate staff on the system architecture for the Strategic Defense Initiative, one of General Abrahamson's aides provided these charts (hold up charts) showing how the Pentagon now envisions a deployed Star Wars system would operate. He gave a cost estimate for such a system that was considerably more than the entire amount of money ($311.6 billion) you are requesting in FY 1987. Can you confirm that such a figure is a reasonable expectation of what this preliminary design of a system architecture would cost?

Secretary **Weinberger**. At this time, no one can predict with any accuracy the expected cost for a proposed SDI system. Much more work has to be done to come up with a valid projection for the SDI system cost. Efforts are underway to address means of reducing cost from what they would be in a business-as-usual environment. Our goal is to arrive at an SDI system that meets the President's strategic defense objectives at an affordable cost.

Senator Levin. What direction have you given the Director of the SDI for the time that he recognizes that SDI research is being inhibited by the restriction of the ABM Treaty?

Secretary **Weinberger**. The President has directed that the SDI program to be conducted in a manner consistent with the ABM Treaty. However, the President reserves the right to conduct the program under the legally correct interpretation of the ABM Treaty in the future.

Senator Levin. When do you estimate that a decision on the deployment of SDI in whole or part, will become technically possible.

Secretary **Weinberger**. We have made significant progress already in the technical definition of the program. Before a decision is made to move from research to development and possible deployment, the system has to prove to be effective, survivable, and affordable. We envision that results of our research efforts today will support a potential early 1990's decision on whether to develop and deploy advanced defensive systems.

Senator Levin. Please provide on a quarterly basis the total funds obligated and expended for SDI for fiscal year 1984 and fiscal year 1985.

Secretary **Weinberger**. Total funds obligated and expended for SDI for fiscal year 1984 and fiscal year 1985 are as follows:

FY 1984 $50M SDIO FUNDS

[Percentage]

	September 1984	December 1984	March 1985	June 1985	September 1985	December 1985
Obligated	0	3	58	77	98	98
Expended	0	0	2	10	42	60

FY 1985 OBLIGATION RATES

[Percentage of $1.4B]

	March	June	September	December
Obligated	56	70	94	96
Expended	9	21	40	57

SOURCE OF THE $11.2 BILLION FOR DEFENSE INCREASE

Senator **Levin**. You have said that "between fiscal year 1980 and fiscal year 1985, federal revenues increased by $217 billion despite, or as some of us believe, because of the President's tax cut. Federal expenditures, on the other hand, increased by $335 billion, but less than one-third of that increase, $111.2 billion, was for defense." In making this calculation, did you use data from OMB's historical tables from fiscal year 1986 or fiscal year 1987 for total federal revenues, or did you exclude revenues for the trust funds, like social security and highways, which cannot be used for defense? What is the source for the figure of $111.2 billion for the defense increase?

Secretary **Weinberger**. The data are from the budget of the United States Government 1987. The calulations are as follows:

[In billions of dollars]

	1980	1985	Increase
Receipts	517.1	734.1	216.9
Federal outlays	590.9	946.3	355.4
DOD outlays	132.8	244.1	111.2

The revenues are from the total budget and include off-budget receipts of the social security trust fund. DOD outlays are actuals for the Department of Defense, Military (Function 051).

TRIDENT SUBMARINES

Senator **Levin**. You have credited the Reagan administration with building seven new Trident submarines "since we came to Washington." Is it not true that construction of five of these seven Tridents was underway before the Reagan administration took office, with one of these submarines under construction as early as 1976?

Secretary **Weinberger**. The lead Trident submarine was funded in fiscal year 1974. Seven Trident submarines have been delivered since the current Administration took office. Since it takes more than six years to build a Trident submarine, none of these ships were budgeted by this Administration. However, the current Administration has continued the Trident program by budgeting for the improved Trident D-5 capable submarines. Under this Administration, the ninth through the fourteenth submarines have been funded or budgeted through fiscal year 1987 and we plan to continue this important program at a rate of one submarine per year.

Senator **Levin**. What are the estimated defense expenditures for the member nations of the Warsaw Pact for the most recent year available? What are the comparable figures for NATO? Include procurement, RDT&E, and O&M expenditure estimates as separate accounts, if possible, and excluding from the calculation such expenditures as civil defense, coast guard, the civilian space program, and internal security forces.

Secretary **Weinberger**. As you are aware, developing national defense expenditure data which is comparable is a difficult task heavily dependent on assumptions and methodology. This problem is made more difficult when dealing with closed societies such as the Warsaw Pact where their published defense expenditures are not at all tied to reality. (For example, the Soviet Union publicly claims they spend only about 19 billion rubles on its forces annually. This equates to approximately $25 billion.)

The method for developing Warsaw Pact defense costs expressed in U.S. dollars used to develop the table below was to take our estimates of all components of Warsaw Pact military programs and estimate what these programs would cost using U.S. prices and cost factors.

The method used to provide comparable data for NATO for the table below involved calculating non-U.S. NATO costs by converting actual NATO non-personnel defense outlays (in constant prices) to U.S. dollars, using purchasing power parities; and by multiplying NATO military personnel strengths by a U.S. military compensation factor. Comparable U.S. figures are then added to this amount.

COMPARATIVE DOLLAR COSTS OF TOTAL MILITARY PROGRAMS

[U.S. billions of dollars, 1984 prices, rounded to nearest $5 B]

	NATO	Warsaw Pact
1976, 1977, 1978, 1979, 1980, 1981, 1982, 1983	[Deleted]	

NOTE.—Figures include France but not Spain.

For individual countries and separate program accounts, the data for 1984 are:

COMPARATIVE DOLLAR COSTS OF MILITARY PROGRAMS, 1984

[U.S. billions of dollars, 1984 prices]

	Procurement	RDT&E [1]	O&M	Total [2]
Warsaw Pact:				
Bulgaria	[Deleted.]			
Czechoslovakia				
GDR				
Hungary				
Poland				
Romania				
U.S.S.R.				
NATO:				
Belgium				
Canada				
Denmark				
France				
Greece				
Italy				
Luxembourg				
Netherlands				
Norway				
Portugal				
Turkey				
United Kingdom				
U.S.				

NA Not available at this time. Comparably-defined defense costs for the U.S. and U.S.S.R. are being revised.

[1] The Soviet Union accounts for the major share of the Warsaw Pact RDT&E effort.

[2] The Warsaw Pact and NATO total costs additionally include personnel (regular troops and internal security forces with a military mission) and construction.

[3] Less than $50 million.

The values shown above the NATO are for comparison only. First, they do not reflect what NATO nations actually spent on defense nor do they reflect the cost of the military to their economies. Second, the Warsaw Pact figures represent or are estimated from an intelligence estimate of what it would cost in dollars to replicate their forces in the U.S. while the NATO figures represent reported outlays. For a more detailed description of Allied expenditures I recommend the DOD Report to Congress on Allied Contributions to the Common Defense.

[Deleted.]

IMPROVEMENTS TO STRATEGIC TRIAD MODERNIZATION

Senator Levin. Were improvements and additions made to all three legs of our stragetic triad in the 1970s?

Secretary **Weinberger**. In contrast to the sizable modernization and deployment programs of the 1960s, U.S. strategic forces did not undergo substantial improvement during the 1970s. At the beginning of the decade, and partially in response to the SALT I process, our strategic forces were upgraded by the deployment of both MIRV'ed ICBMs and SLBMs, the Minuteman III and Poseidon, respectively. These deployments, however, represented the culmination of development programs initiated during the 1960s. Deployment of the C-4 (Trident I) SLBM on older Lafayette class SSBNs was also begun in 1978. The bomber force did not undergo any significant modification program during the 1970s; moreover, deployment of the B-1 bomber was delayed by President Carter's decision to cancel the program in 1977.

In contrast to the limited improvements made to our own strategic forces, Soviet strategic forces underwent massive and continuous deployment and modification programs during the 1970s. The buildup of Soviet strategic forces included the deployment of 11 new and/or modified ICBMs, six new and/or modified SLBMs, and four new types of SSBNs. Between 1971 and 1980, the Soviet Union added about 1000 more missile warheads then we did. Whereas the missile warheads added to the U.S. inventory during this period consisted largely of soft-target Poseidon weapons, growth in the number of Soviet missile warheads consisted mostly of a larger number of highly accurate, hard-target warheads. By the close of the decade, these deployments brought the Soviet Union to a position of strategic parity, and in some areas, to a position of superiority relative to U.S. forces.

The Strategic Modernization Program now in progress will redress the imbalance between U.S. and Soviet strategic forces brought about by this massive Soviet build-up. The President's program includes an across-the-board modernization of U.S. strategic offensive forces, strategic defensive forces, and strategic command, control, communications and intelligence systems. This modernization will ensure continued deterrence, and will provide incentives for the Soviet leadership to negotiate equitable, mutual, and verifiable arms reductions.

Senator **Levin**. Why are we spending money to develop countermeasures to a Soviet SDI when the President says we are so anxious for them to have an SDI that we will make it available to them?

Secretary **Weinberger**. Our concern is not with an overt, legal and effective Soviet SDI-like defense against ballistic missiles—provided the U.S. has a similar option. However, the Soviets refuse even to acknowledge their own efforts in acquiring strategic defenses. Indeed, the Soviets have developed the capability to break out of the ABM Treaty in the near term with current-technology defenses. If that were to occur, it would only be prudent for the United States to have countermeasure options that could be deployed to negate the Soviet effort. Such countermeasures would be feasible against a near-term Soviet break-out because such defenses would not be based on advance defense technologies, but rather on current technologies. They would not be a useful response to a truly effective Soviet defense based on advanced, SDI-related technologies.

We are prudently spending a modest amount to ensure that our strategic offensive forces—on which we today must rely exclusively for deterrence—remain effective retaliatory systems in light of evidence that the Soviets may be preparing to break out of the ABM Treaty. Obviously, such a situation bears no resemblance to a world in which both sides were moving (preferably cooperatively) toward more defense-dominant postures, and in which offensive nuclear arms were becoming impotent and obsolete.

Senator **Levin**. If the Soviets unilaterally deployed an SDI type defense system, and we were unable or unwilling to do so, what would our response be?

Secretary **Weinberger**. We are currently faced with the prospect that the Soviets may be unilaterally preparing a territorial ballistic missile defense system in violation of the ABM Treaty. This Soviet program appears to include aggressive research and development into advanced, SDI-type technologies. We believe our pursuit of the SDI program is a prudent and necessary hedge to such a Soviet move.

ADHERING TO SALT II

Senator **Levin**. Are you opposed to our continuing to adhere to SALT II?

Secretary **Weinberger**. Yes. I strongly support the President's decision announced on May 27, 1986, that the U.S. can no longer comply with the flawed SALT II framework which the Soviets have seriously violated.

Senator **Levin**. Do you oppose the negotiation of any additional limits or restrictions on SDI development or deployment? If not, what types of limits or restrictions do you feel are appropriate?

Secretary **Weinberger**. I have made my position on this subject very clear. I certainly would oppose anything that blocked or in any way prevented our developing strategic defense. I do not want ever to agree to anything that would prevent our doing the kinds of things necessary to see if we can develop and deploy an effective defense against Soviet missiles. I think that's the most hopeful prospect mankind has and the President's high priority that he assigns to that is, I think, absolutely right because we have to try to develop this.

Senator **Levin**. Specifically, how much are the Soviets spending on comparable technologies to SDI?

Admiral **Crowe**. The costs of comparable Soviet SDI technologies are primarily in their research and development program. At this time, the DIA has no breakdown of these program costs.

COMPARABLE U.S/SOVIET SDI TECHNOLOGIES

Senator **Levin**. On each of the technologies involved in SDI, are the Soviets ahead, behind, or at about the same place in their research?

Admiral **Crowe**. *Directed energy.*—In those areas which the U.S. has chosen to pursue for SDI purposes there is rough equality, overall, in the basic level of technology. However, there are other technologies such as certain types of lasers which could have an ABM role in which there is a Soviet lead. It should be noted that larger Soviet efforts over the last twenty years have given them a lead in the integration of laser technologies into weapons devices. In this regard the first operating high energy laser weapons for missions such as air defense are likely to be Soviet.

Kinetic energy.—There is a U.S. lead in hit-to-kill technologies and rough comparability in electromagnetic launchers. Again the Soviets have a commitment to programs for early weaponization and have produced an operational kinetic energy ASAT.

Surveillance, acquisition, tracking, and kill assessment.—The U.S. is believed to lead in development of optical (and infrared) sensors. Both the U.S. and Soviets each lead in some aspects of radar technology however, the Soviets have a much larger industry.

Battle management and C^3.—In the key technology of computers the U.S. holds a substantial lead in electronic computers. The Soviets, however, have a strong program in optical computers which could have the potential to give them an advantage for some SDI related tasks by the end of the 1990s.

Support.—This category comprises a wide variety of technologies. In some areas such as space power there is a Soviet lead. In other important areas such as the ability to maintain systems in orbit, there is a U.S. lead. There is probably rough equality in the ability to build heavy lift vehicles for space launch.

General comment.—It should be remarked that in pursuing SDI missions technological strengths in some areas can offset weaknesses in others. Additionally, with the Soviet Union and the U.S. can be expected to design systems which make optional use of their respective technological advantages. Degree of commitment is also a major factor. In this regard we believe the Soviets have, in the past, had a larger and steadier commitment toward developing defenses against ballistic missiles.

UNITED STATES-SOVIET BALANCE

Senator **Levin**. Do you believe that the United States is well behind the Soviet Union in every kind of offensive weapon?

Admiral **Crowe**. There are many ways to measure the relative balance of strategic offensive weapon systems. One method involves the use of static comparisons of numbers of delivery vehicles, and the United States is well behind the Soviets in the three major weapons systems, ICBM, SLBMs, and Bombers. More importantly, trends in the strategic balanced shifted in favor of the Soviets during the past decade as we exercised unilateral restraint while the Soviets modernized and expanded their strategic forces. The United States' strategic force modernization program, however, is intended, and in some cases has begun to redress these adverse trends in the strategic force balance.

ABM TREATY LIMITS ON SDI

Senator **Levin**. The ABM Treaty places no limits on SDI research. Does it place limits on the deployment of SDI? If so, must those limits be changed by mutual agreement prior to any SDI deployment?

Admiral CROWE. SDI is a research program designed to address fundamental questions about the technical feasibility of defenses against ballistic missiles. We do not have any preconceived notions about the defensive options the research may generate. We will not proceed to development and deployment unless the research indicates that defenses meet strict criteria.

Under the ABM Treaty, the U.S. is allowed to deploy traditional ABM systems, i.e., no more than one hundred ABM launchers and interceptor missiles in an ABM system deployment area. However, it is not likely that such a defensive system, such as that proposed by the President, would be so limited.

If, at some future time, the United States, in close consultation with its allies, decides to proceed with deployment of defensive systems proved feasible by SDI research, we intend to utilize mechanisms for U.S.-Soviet consultations provided for in the ABM Treaty. Through such mechanisms, and taking full account of the Soviet Union's own expansive defensive system research program, we will seek to proceed in a cooperative fashion with the Soviet Union.

FISCAL YEAR 1987 DOD POSTURE

Senator LEVIN. The Joint Chiefs in their 1984 Posture Statement showed NATO military expenditures higher than Warsaw Pact military expenditures. Would you update the figures in that chart?

Admiral CROWE. Attachment A contains an extract of the fiscal year 1984 Military Posture Statement showing the chart you refer to. Attachment B reflects Figure II-7, Page 17 of this year's Military Posture Statement which contains the updated figures you desire.

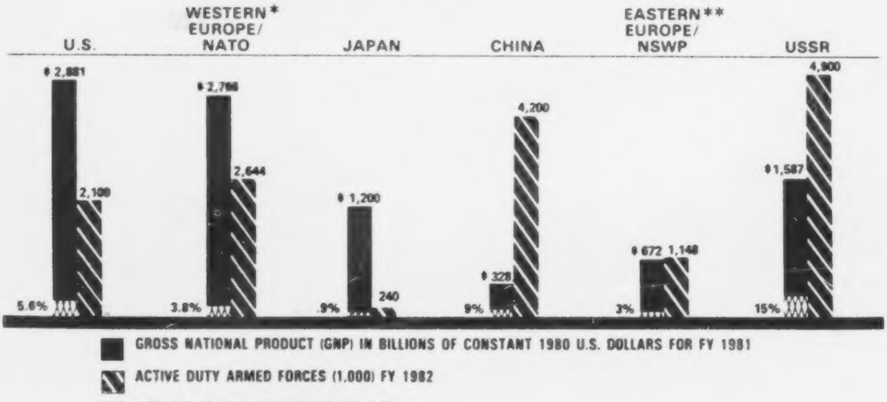
USSR is the highest priority in upgrading the US security posture. In parallel, sensible arms control agreements can help reduce the danger of nuclear war and contribute to the security of the US and its allies. The Joint Chiefs of Staff support the President's proposals for substantial reductions in nuclear weapons. But there should be no misunderstanding, concomitant modernization of the United States strategic nuclear forces is essential for deterrence and security. Nuclear arms control agreements can help provide boundaries for the problems of nuclear armaments and can help assuage the world's fears of nuclear war. It is unlikely, however, that such agreements can greatly change the overall Soviet threat to the US and its allies; and unless the Soviets reduce overall military spending and armaments, agreements will have little affect on the size of defense budgets required.

Alliances: NATO and East Asia

The second fundamental ingredient of US strategy is a strong system of alliances. The sharing of democratic values and the combined economic strength of the advanced industrial countries offer a firm base for effective collective security among the NATO nations and US allies in East Asia (see Chart 1-2). Further, the integrity of US collective security arrangements requires recognition that the interests of the United States and those of its allies are not always completely congruent, particularly in geographic areas outside the alliances. Most of the allies of the US have no counter to the nuclear power of the USSR. Therefore, the alliance element of US strategy, critical to dealing with all manner of conventional warfare threats to both the US and friendly nations, functions against the backdrop of American nuclear deterrence. Just as nuclear deterrence is the ultimate guarantor of peace and survival for the US, so it is also for US allies.

The Soviets, by achieving, and in some cases, exceeding nuclear parity, have guaranteed that war cannot be deterred with strategic nuclear weapons alone. The Soviets and their allies have fielded huge, combined arms armies composed of large numbers of ground forces, air forces, and nonstrategic nuclear weapons — forces which the US, acting alone, does not match in numbers. Allied contributions in weaponry, well-trained manpower, facilities, and control of key geographical areas all reduce the size of the forces needed by the United States and make a significant contribution to deterrence.

FOUNDATION OF U.S. COALITION STRATEGY
ECONOMIC AND MILITARY STRENGTH OF MAJOR POWERS



* EXCLUDES FRANCE, CANADA, AND SPAIN
** EXCLUDES ALBANIA AND YUGOSLAVIA

CHART 1-2

Attachment A

technology must strike a balance among technical sophistication, essential readiness, cost, utility, and endurance if it is to be effective in our force structure.

The maintenance of a US technological advantage also depends upon efforts to prevent the transfer of such technology from the United States and other advanced nations to the Soviets and other potential adversaries. The transfer of critical technology to potential adversaries reduces their cost of acquiring new capabilities, allows them to deploy new systems sooner, and provides data that can be used to counter the effectiveness of US weapon systems and equipment.

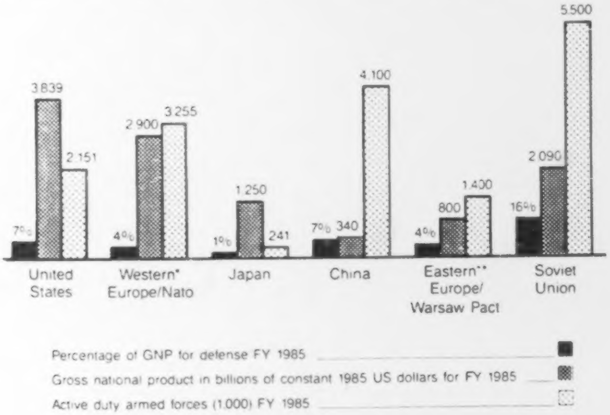
Allied Forces

Strong alliances are an important part of the US military strategy. The relative economic and military strengths of the major nations and blocs are indicated in Figure II-7. The figure shows the impressive potential of the democratic economies. US allies add substantially to the overall defense effort in terms of both defense activities and investment.

US and allied defense efforts must be integrated effectively to ensure that their collective capabilities are realized. The need persists for greater interoperability between US and allied equipment, ammunitions, and techniques, as well as command, control, communications and intelligence (C^3I) systems. The United States and its NATO Allies are continuing to improve capabilities for mutual support and coordination. Interoperability with friendly and allied Asian countries is improving through equipment and procedure modifications and frequent combined military exercises.

Strong alliances, combined with a continuing number of important initiatives that are beginning to result in industrial expansion and modernization, enable the United States to counteract the Soviet threat. Positive results from policies and programs established in recent years are being seen. One example is sharing of technology with NATO countries and Japan to reduce redundancy of expenditure in research and development (R&D) efforts. In addition, Congress has supported increased funding for surge industrial re-

Economic and Military Strength of Major Powers



* Excludes US, includes France and Spain

** Excludes Soviet Union, Albania, and Yugoslavia

As of 1 January 1986

FIGURE II-7

U.S./SOVIET STRATEGIC OFFENSIVE FORCES

Senator LEVIN. On page 19 of your Posture Statement for fiscal year 1987 you provide a table of the Strategic Offensive Forces of the United States and the Soviet Union. The following questions derive from that table. Last year 520 SS-11 ICBMs were listed but only 450 this year. Are these SS-11s being retired and replaced with SS-25s?

Admiral CROWE. Yes, [deleted] SS-11 silos have been dismantled [deleted] probably in compensation for the deployment of the SS-25s.

Senator LEVIN. Is the fact that you list only 45 SS-25s deployed an indication that the Soviets are retiring more ICBMs than they are building replacements for?

Admiral CROWE. [Deleted.] The figure of 45 SS-25s deployed reflects an unclassified number made public by the Sec Def in late 1985.

Senator LEVIN. Are any of the SS-25s being deployed in a mobile mode?

Admiral CROWE. All of the SS-25s are deployed in a road-mobile mode, similar to that of the SS-20 IRBM.

Senator LEVIN. Last year you listed 42 SS-N-5s but only 39 in this year's chart. Does that represent the retirement of a GOLF class submarine? Are these SS-N-5 missiles counted under SALT limits?

Admiral CROWE. The fiscal year 1986 military posture statement listed 45 SS-N-5s. [Deleted.] The GOLF II class SSB order-of-battle remains unchanged.

SS-N-5 missiles are not counted under SALT limits because both the period of missile flight testing and the period when the missile launch platforms became operational predate the treaty's 1965 bound.

Senator LEVIN. There is also a reduction in SS-N-6s from 336 to 304. Does this represent the retirement of two Yankee I submarines? If so are they being completely retired or are they being converted into cruise missile boats?

Admiral CROWE. The reduction in the total number of SS-N-6s from 336 to 304 reflects the dismantlement of two Northern Fleet Yankee class SSBNs. It is not yet clear if they are being retired completely or if they are being converted for other missions.

Senator LEVIN. The chart shows an increase in deployed SS-N-18s from 208 to 224. How many boats carry those 224 missiles? Is this an increase from last year's total?

Admiral CROWE. A total of 14 Delta III class SSBNs (7 in Northern Fleet and 7 in the Pacific Fleet) carry the listed 224 SS-N-18 missiles. This missile total does not represent an increase from last year's total. According to our chart, 224 were listed last year also.

Senator LEVIN. The chart lists 80 SS-N-20s, with a footnote that this includes missiles potentially carried on Typhoon boats. How many of the 80 missiles are not operational?

Admiral CROWE. Only three of four Typhoon class SSBNs are assessed to be operational. Consequently, only 60 of 80 SS-N-20 launchers are operational, but 80 are accountable under SALT II.

Senator LEVIN. Are the 32 SS-NX-23s you list deployed on two new boats or are they backfitted onto older boats?

Admiral CROWE. The listed 32 SS-NX-23s are all associated with the latest variant of the Delta class SSBN, the Delta-IV.

BEAR BOMBERS

Senator LEVIN. Of the 130 BEAR Bombers listed, how many are BEAR Gs and how many are BEAR Hs? How many of the Hs are ALCM carriers? How many of the Gs are fitted to carry Kangaroo missiles, and how many of these missiles can each of these bombers carry? How many ALCMs can each BEAR H carry and how many bombs?

Admiral CROWE. [Deleted] BEAR G and a total of [deleted] BEAR H are currently in the Soviet inventory. [Deleted] of the BEAR H are deployed to operational bases, [deleted].

All of the BEAR Hs are assessed to be ALCM carriers.

The BEAR H is assessed to be able to carry up to 12 AS-15 ALCMs, or a load of [deleted] bombs, or [deleted] AS-15s in combination with a reduced load of bombs.

BACKFIRE BOMBERS

Senator LEVIN. How many of the 270 Backfire bombers listed are assigned to Naval aviation? How many weapons and what types do the Air Force Backfires carry?

Admiral **Crowe**. [Deleted] Backfire are assigned to the Soviet Air Force and [deleted] Backfire are assigned to Soviet Naval Aviation.

Air Force Backfires can carry [deleted] AS-4/Kitchen, or [deleted] bombs, or [deleted] AS-4 in combination with a reduced load of bombs.

BLACKJACK BOMBER

Senator **Levin**. When do you expect the new BLACKJACK bomber to become operational? How many bombs and ALCMs is it expected to carry?

Admiral **Crowe**. The BLACKJACK is expected to be operational in 1988-89.

The BLACKJACK is expected to carry up to 12 AS-15 ALCMs, or up to [deleted] bombs, or [deleted] AS-15s in combination with a reduced load of bombs.

START PROPOSAL

Senator **Levin**. Since the latest U.S. START proposal includes a proposed sublimit of six million pounds of total throw weight for all SLBMs and ICBMs on each side, please supply, preferably on an unclassified basis, the estimated throw weight for each of the Soviet missiles listed in the chart, broken out by Mod number.

Admiral **Crowe**.

ICBM's	Estimated throw-weight (lbs)	SLBM's	Estimated throw-weight (lbs)
[Deleted.]			

Questions Submitted by Senator Jeff Bingaman

BASE CLOSURES

Senator **Bingaman**. Mr. Secretary, last March Chairman Goldwater raised the issue of closing unnecessary military facilities as a cost saving measure. Senator Goldwater's notional list of 27 installations that could be considered for closing was based on direct input from your office. In the Gramm-Rudman environment, we have an even greater need to achieve savings wherever possible with the least negative effect on our National Security.

Will the Department vigorously pursue base closings in the coming year using the recent congressional changes to the statute?

Secretary **Weinberger**. We have consistently stated that to close non-essential military bases quickly and efficiently, we need legislation that would expedite the closure process and additional, up-front funds to pay the military construction and other related costs. The recent changes to the base closure statute removed one of two Congressional notification requirements and stipulated that base closure decisions must be included with annual budget submissions. Nevertheless, the Department must still comply with all environmental regulations (which can be used by opponents to challenge and delay basing decisions), and go through the normal Congressional process to get design funds and then authorization and appropriations for facilities at the new bases. All of that slows us down and creates opportunities for people to delay or block the closure. It was because we did not get the legislation and money we need that closure proposals were not included in the FY 87 budget.

In response to Senator Goldwater's recent request for a list of bases to be closed, we cited three candidates that could be used to determine the will of Congress on the closure issue: the Army Materials Technology Laboratory, Watertown, MA; the Naval Hospital Philadelphia, PA; and Lowry AFB, Denver, CO. We are prepared to close these installations, and screen our base structure for other closure candidates, should the Congress provide the needed legislation and up-front money.

SHIPBUILDING

Senator **Bingaman**. At the same time that we face the need to close less essential bases, as cost saving measures in the Gramm-Rudman fiscal environment, why is the Navy sponsoring a plan to open 15 new Naval bases under the guise of the Strategic Homeporting Plan?

Secretary **Weinberger**. The Navy's Strategic Homeporting Concept envisions homeporting ships at 8 new sites, not 15. The Strategic Homeporting Concept is valid as a strategic necessity and cost effective when the strategic advantages are considered. As we increase our Navy to 600 ships, facilities to support the new ships coming on line have to be provided somewhere. The Navy's Military Necessity/Cost Effectiveness Study submitted to Congress in November 1985 concludes that the "delta" cost between placing these new ships in existing homeports versus new ports is $217 million which is less than 2% of the Navy's FY 86-90 MILCON FYDP. The validity of this program has been certified by top Navy professionals, both past and present.

Senator BINGAMAN. Further, the Navy Secretary estimates that the total cost of opening these bases will be roughly between $750 million and $1.5 billion. Preliminary GAO estimates that the military construction costs of these bases will cost at least double, if not triple, that amount. In light of all of these factors, have you agreed to the Navy Secretary's new basing plan, and if so, why?

Secretary WEINBERGER. The Navy's estimate for the total Strategic Homeporting Initiative is $846 million including family housing and non-appropriated funds (exclusive of $150 million of State/Local offset funds) for the new homeports. DOD's response to the GAO Draft report will clarify apparent misconceptions held by the GAO. I am satisfied that the Navy's estimates are accurate. I have agreed to and support the Navy Secretary's Strategic Homeporting Concept.

CUTTING PRODUCTION VERSUS CUTTING SPARES AND SUPPORT

Senator BINGAMAN. Mr. Secretary, in reviewing the budget proposal I note that you have made a concerted effort to retain high production levels on existing systems. I applaud you for that. I strongly support your efforts to increase the manufacturing efficiency for our combat systems.

I question how you were able to do that, however. Last year you projected a need for $122.4 billion for procurement in FY 1987. This year you are asking $95.8 billion, which is $26.6 billion less than you projected only one year back.

How are you able to sustain high rates of production while cutting 22% from your budget plans?

Secretary WEINBERGER. Obviously, we cannot maintain everything we had planned before. We try to maintain rates on the high value items, however, and in fact this year's budget contains increases for several systems such as the F-16 and F-18.

Senator BINGAMAN. The staff informs me that $10.4 billion of the $26.6 billion or 40% came from cutting spare parts and support equipment.

Did the Department have a policy this year to cut support equipment and spare parts in order to keep up production of major weapon system?

Secretary WEINBERGER. No it did not, we try to keep two categories in balance.

Senator BINGAMAN. Will a $10.4 billion reduction in spare parts and support equipment affect our combat readiness and sustainability?

Secretary WEINBERGER. We would certainly be better off with additional money. A reduction of this magnitude cannot be offset easily by readily available measures of expediency. We can only attempt to minimize such effects.

IMPORTANCE OF RETAINING HIGH PRODUCTION RATES

Senator BINGAMAN. Mr. Secretary, the budget you have sent up marks a major change in that you have made a conscious and explicit effort to retain high production rates. I applaude that. I know that you do not want to discuss any cuts to your budget today. Unfortunately, I think that cuts are inevitable.

As we proceed further this spring in reviewing the budget, we will be confronted with a range of contending priorities. One clear tradeoff is retaining the high production rates incorporated in your budget, while taking cuts in other areas.

I noted that your spare parts and support equipment accounts have been cut $10.4 billion against last year's plans. Obviously, spare parts and support equipment are needed to support deployed forces, not ones scheduled for procurement.

If we consider (budget) cuts in three areas: reducing rates of production, further cuts of spare parts and support equipment and slowing down new starts, where should we place priority emphasis?

Secretary WEINBERGER. We should make a balanced reduction. By balanced is meant making budget cuts so the result is a balanced force capability in the field. Enough equipment must be procured to properly equip units. Higher production rates usually result in more efficient production and lower unit cost. The equipments deployed must be available with sufficient spare parts and in sufficient resupply quantities to sustain the units in combat. We must continue to develop some new systems employing new technologies to maintain an advantage or parity with the Soviets. In this category we must choose to proceed with those systems providing the most effective capabilities or high force multiplier effects.

Chairman GOLDWATER. Thank you, Jim.

If there are no other questions, the meeting is adjourned.

[Whereupon, at 12:55 p.m., the committee adjourned, subject to the call of the Chair.]

Report of the Secretary of Defense
Caspar W. Weinberger
to the Congress

on the

FY 1987 Budget, Fy 1988 Authorization Request
and
FY 1987-1991 Defense Programs

February 5, 1986

This Report Reflects the FY 1986 Defense Budget
as of January 1, 1986

To the Congress of the United States

This past year, Americans paused to note the 40th anniversary of the end of World War II. We remembered those valiant men and women who sacrificed their lives for our freedom. We gave thanks for 40 years without world war -- a period nearly twice as long as the time-span between World War I and World War II. But as the year progressed, national security concerns were overshadowed by efforts to reduce the federal budget deficit. In this light, the lessons of war and peace faded.

The central lesson of World War II and the past four decades of peace is this: American military strength is the prerequisite of peace. Strength is the price for peace.

If peace seems expensive, consider the alternative. By scrimping on strength, we can reduce our security and increase the risks of war. But if we fail to keep the peace, the cost to our standard of living, indeed to our lives and our country, would be incalculable.

In 1981, with broad bipartisan support, this Administration began rebuilding American military strength. As I said in my first Annual Report, the road to recovery of a secure deterrent would be neither short nor easy. To reverse the results of a decade in which U.S. defense efforts declined by 20 percent in the face of a 50 percent increase in Soviet military strength required a long-term program. Our challenge and our urgent need was to regain sufficient military strength to persuade the Soviets that we would allow them no significant exploitable military advantage against our vital interests. This required us to pursue several high priorities simultaneously.

As we look back on the first five years of the rebuilding program, what have been the results? The prime result is that, unquestionably, U.S. military forces are stronger, readier, more capable, and have a higher morale than at any previous time in our peacetime history. The consequences of this are profound.

Our rebuilding of American military strength is redefining the terms of the U.S.-Soviet relationship. Rather than dealing from weakness (and the prospect of greater relative disadvantage), the United States is now beginning to deal from strength and the promise of greater relative strength. We must persuade the Soviets that this is not a short-term commitment. Nothing could so enhance the prospects for long-term peace as Soviet acceptance of the proposition that they can achieve no significant exploitable military advantage over us.

We are encouraged by the early returns. The sequence of annual Soviet aggression against new targets that began in the mid-1970s with Angola and culminated in the brazen invasion of Afghanistan in 1979 has ceased. After walking out of the Geneva negotiations in protest over NATO's deployment of theater nuclear weapons in 1983, the Soviet delegation has returned to the bargaining table despite their threat never to return until NATO's response to their SS-20s had been removed.

At the recent meeting between President Reagan and Secretary General Gorbachev, the Soviets began for the first time to talk seriously about deep cuts in strategic offensive forces -- an idea they had earlier rejected out of hand. Each of us can ask himself: Is America safer than we were five years ago?

In 1981 the crucial issue was: Should the United States, under any circumstances, or for any reason, acquiesce to the Soviet Union's attempt to achieve a position of global military superiority? Across the political spectrum of conservatives and liberals, Americans answered: "no." And we agreed to pay the price for military strength that could deter war. Denying the Soviet Union exploitable military advantages cannot by itself guarantee peace. But if we allow the Soviet Union such advantages, as they had in 1980, we can be assured that we will be tested in ways that risk war.

The Department of Defense requests for FY 1987 $311.6 billion in budget authority and $274.3 billion in outlays. This FY 1987 budget funds the continuation of the program for reconstructing American military strength that our Administration has proposed and the Congress has authorized in each of the past five years. Specifically, this 3 percent increase in real budget authority for FY 1987 is based on the compromise between the President and the Congress reached in August 1985 for zero real growth in FY 1986, 3 percent in FY 1987, and 3 percent in FY 1988. (In fact, the FY 1986 appropriation failed to meet that level, cutting real defense budget authority by 2.2 percent -- not including the further cuts required by the Gramm-Rudman law.)

The budget proposed for FY 1987 is the minimum I can recommend in good conscience to fund a secure deterrent at a prudent level of risk. Because of the federal deficit, our FY 1986 budget was reduced by $36 billion before that request was submitted to the Congress in January 1985. The Congress cut another $24 billion. And the deficit reduction provisions of the Gramm-Rudman law are now imposing $11 billion of further cuts in our FY 1986 budget authority. Pursuing management reforms to ensure that we get the most strength for every dollar of defense expenditure in such a turbulent budgetary environment is extraordinarily difficult. Through a combination of reductions, efficiencies, and extensions, we believe that it is possible for us to achieve a secure deterrent with the program we now propose.

Wishful thinking, however, cannot meet the growing risk we face from the Soviet's continued and growing military power, nor deter war, nor win the peace. Further cuts in our efforts to regain deterrent military strength will jeopardize our security. Those who judge that, to reduce the federal budget deficit, the United States should underfund the program previously agreed to by the President and the Congress and run higher risks to our security should acknowledge their priorities. The pretense of favoring strong defense while being unwilling to support strong defense budgets is unsustainable.

The argument that in meeting the current deficit crisis, fairness requires cuts to be divided equally between defense and domestic programs has a superficial plausibility. But consider this proposition. Some of the needs addressed by federal domestic spending can also be met by state governments, local governments, nonprofit enterprises, businesses, and individuals. But if the U.S. government fails to provide for the nation's defense, no one else can fill the gap. Defense now takes about one-quarter of all federal expenditures, one-sixth of all government expenditures (federal, state, and local), and less than 7 percent of the nation's GNP. Do Americans really want to risk our lives, fortunes, and freedom for an increment of current consumption? More important, would it be fair to disregard the sacrifice of those who fought for us and to risk the freedom of future generations, just so that this generation can consume more now?

Seventy-five years ago, Theodore Roosevelt enjoined Americans to "speak softly and carry a big stick." His counsel of caution is as relevant today as then. So is his proposition about a big stick, though it must be extended. In meeting the challenge of a nation with the ambition and the constantly growing military power of the Soviet Union, we must carry a stick at least large enough to deter our adversary from thinking about using his, big as it is.

Strength is the price we must pay for peace. Over the past five years, the Congress has appropriated the funds to restore our strength and to secure the peace. If we persist, we now have the prospect of the most far-reaching agreements ever achieved with the Soviet Union to cut numbers of nuclear weapons, reduce the risks of nuclear war and, ultimately, if we deploy effective strategic defense systems, even to overcome the threat of nuclear annihilation. But such agreements can only be achieved if we negotiate from strength -- and only if the Soviet Union sees that the alternative to meaningful agreement is the likelihood of reaffirmed, not reduced, American strength. Now is the time to strengthen the President's hand in these negotiations -- not to tie one arm behind his back.

This choice is ours: we can buy the forces required to secure freedom and peace for ourselves, our allies, and our descendants; or we can meanly conclude it is too great an effort, falter and thus yield to the forces of totalitarianism and tyranny.

Part I

Peace with Freedom

A. INTRODUCTION: OVERVIEW

When the Reagan Administration entered office in 1981, a lengthy debate could have been held on the question: "Which was in worse shape -- U.S. military hardware or U.S. strategic concepts?" Consider our B-52 bombers, for example. They entered service before many of the men who fly them were born. The strategic ideas that guided the development of these men and aircraft are older still. Indeed, most of the concepts that shape our thinking about what forces we need and how they would be used were formulated more than a quarter century ago.

In 1981, we could not delay rebuilding American military strength while we conducted a lengthy conceptual debate. There could be but one overriding priority: to reestablish the balance of military power necessary for stable deterrence. But even as we moved decisively to restore military parity with the Soviet Union, we also began to reassess those strategic concepts inherited from past policymakers.

Now, five years later, we have made significant progress both in strengthening our military forces and in updating our defense strategy and policy. Neither task is complete. But as we address the agenda for the remaining three years of the Reagan Administration, it is useful to summarize major changes we have made in our capabilities and in our ideas at the Department of Defense (DoD). These include:

-- Reversing a decade in which American defense spending declined by 20 percent and our military capabilities weakened in the face of a massive Soviet military expansion;

-- Reconstructing American military strength across all crucial dimensions; and

-- Securing an understanding of the challenges we face and of our strategies for countering those challenges, including: the importance of perceptions in effective deterrence; competitive strategies for deterrence; recognition that the reality of nuclear parity means reduced reliance on nuclear weapons; recognition of the premium on robust deterrence required by a democracy; strategies for reducing and controlling arms; and the Strategic Defense Initiative.

The job is not finished. But we have come far enough in the Reagan modernization program to enable supporters and critics to review not just our promises but also our performance. Thus in addition to presenting the FY 1987 budget and the FY 1987-91 five-year program, this year's *Annual Report to the Congress* presents the need to press on with the programs on which we have made such a good start in the context of the record of the first five years. To what purpose and strategy has the rebuilding of American military strength been aligned? Has our defense program had the hoped-for effect of inhibiting Soviet military aggression? Is our strategy for moving the Soviet Union to serious discussion of arms reductions working? Are we more secure than we were five years ago?

Debate about the defense budget, especially in an era of deficits, rarely focuses on the big picture. Too many of us cannot see the forest for the trees. Even worse, some of us get caught up in the leaves. In an effort to help us all keep some perspective on the forest, let me identify the four central questions each of us should ask ourself in thinking about U.S. defense programs and budgets. These questions are:

1. What level of security should the United States seek? Or, put another way, what degree of risk to peace, national independence, and freedom is acceptable?

2. What investment in military capabilities is required to ensure an appropriate level of security?

3. Can the United States afford this level of investment?

4. Is our defense budget being spent wisely and effectively?

Let me offer brief answers to each question in turn.

What level of security should the United States seek? What degree of risk to peace, national independence, and freedom is acceptable?

In the 19th century, wide oceans, weak neighbors, and rivalries among large powers abroad provided the United States almost total security with minimal exertion or cost. That era is gone forever, a consequence of a shrinking world. As the leading nation in both the Atlantic and the Pacific, the United States has global interests that can be threatened at many points around the world. The development of nuclear weapons and intercontinental ballistic missiles means that no point on earth lies more than 30 minutes from destruction. Preservation of our lives and our freedoms -- indeed our nation's very survival -- requires that we successfully prevent attack upon the United States and our vital interests. If we fail in this effort, we may have no second chance.

If deterrence failed and the United States were the victim of a nuclear attack, what would be the consequences for our lives, our freedoms, and our nation? President Reagan has repeatedly summarized the heart of the matter: "A nuclear war cannot be won and must never be fought." The imperative -- a nuclear war must never be fought -- follows from the fact that in a nuclear war with the Soviet Union there would be no winner. The President's determination to ensure that a nuclear war will never be fought becomes the mandate for our defense program.

What level of security is the Reagan Administration seeking for the United States and our allies? We, of course, seek to limit the risk to the United States to the minimum feasible level consistent with the values of our society. Our objective is to maintain the safest feasible deterrent.

The question each of us must face squarely, especially in an era of concern about budget deficits, is: If we can buy a significant increase in safety by means of a particular defense expenditure, should we do it? We who advocate maximum affordable security, and minimum feasible risk, say "yes." Those who answer "no" must explain why the United States should settle for less.

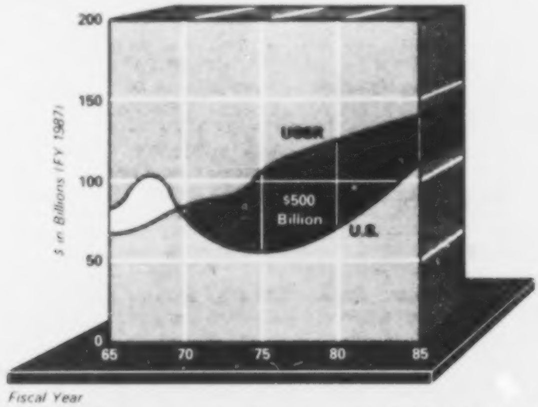
What investment in military capabilities is required to ensure an appropriate level of security?

From 1950 to 1970, we invested about 50 percent more in our military forces than the Soviets did in theirs. In 1970, the tables turned. As Charts I.A.1 through I.A.3 show, over the decade of the

1970s, the Soviets invested about 50 percent more in their forces than we did in our own.

Chart I.A.1

A Comparison of U.S. Defense Investment Expenditures with the Estimated Dollar Cost of Soviet Investment*

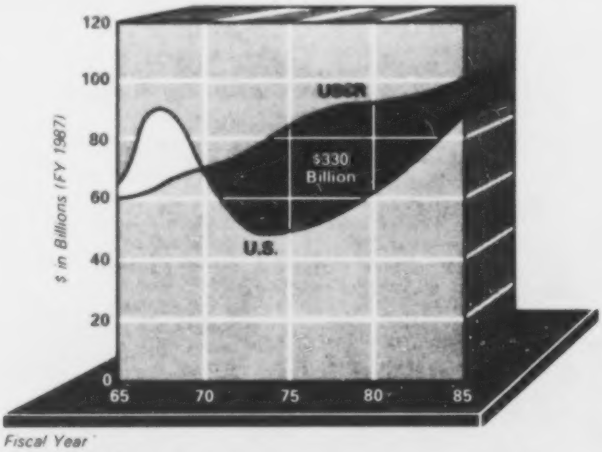


*Includes RDT&E, Procurement and Military Construction, and Non-DoD Funded Programs

An historical footnote provides some perspective. In 1961, when John F. Kennedy took office, the United States was investing about

Chart I.A.2

A Comparison of U.S. General Purpose Force Expenditures with the Estimated Dollar Cost of Soviet Forces*



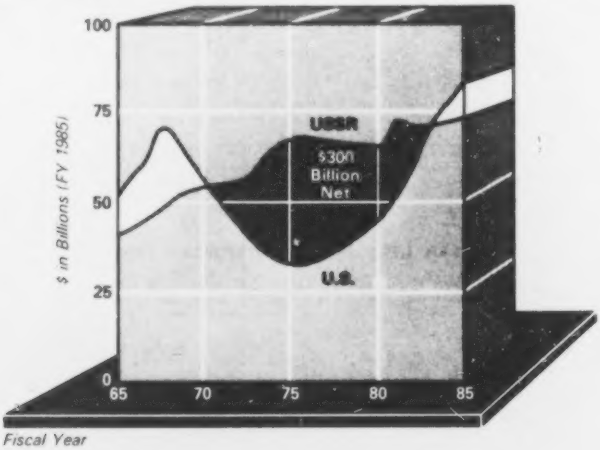
*Excludes RDT&E

$1.40 for every dollar's worth of Soviet military investment. President Kennedy and his key advisors judged that amount not enough and proceeded to widen the gap. In 1981, when President Reagan took office, how much was the United States investing for every dollar's worth of Soviet investment? Sixty-five cents. By FY 1984 we had closed the gap to $.92 for each dollar's worth of Soviet investment. By the end of our proposed five-year program -- if our program is fully funded -- the United States will reach approximately equivalent investment levels with the Soviet Union.

Our estimates of Soviet military investment are of course rough approximations. (In fact, because of the nature of the Soviet political and economic system, estimating a United States-style budget for Soviet military efforts neglects a broad range of nominally "civilian" activities that add to Soviet military power -- such as airplanes and merchant ships built to military specifications). But these comparisons give us a useful sense of the scope of the Soviet military program.

Chart I.A.3

A Comparison of U.S. Defense Procurement Expenditures with the Estimated Dollar Cost of Soviet Procurement[a]



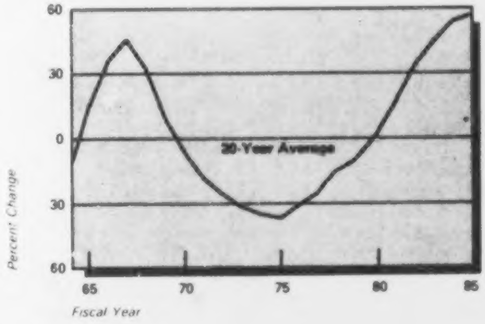
[a] Includes Non-DoD-Funded Defense Programs.

Focusing on annual investments alone, however, misses a larger point. The military capabilities of the United States and Soviet Union in the late 1980s reflect not just current investments, but the sum of investments over previous years. It is necessary, therefore, to compare the stock of capital assets -- airplanes, ships, and tanks -- in the arsenals of the United States and Soviet Union. The fact that for the decade of the 1970s Soviet military investment was 50 percent larger than ours, shapes the reality we confront today.

The Congressional Budget Office has estimated the value of the U.S. stock of military equipment to be $800 billion in FY 1986 dollars. If this equipment has a 15-year life on average, this would require $50 billion of new procurement each year just to maintain our forces at their current level of capability. From 1972 through 1980, U.S. annual investments in military equipment fell far below the average level of investment over the past 35 years.[1] Because of this underinvestment, we did not keep up with the basic cost of replacement of aged and obsolete equipment, and thus depleted our stock of capital assets. In contrast, Soviet investments have exceeded average investment costs and thus added to their stock of assets for more than a decade.

The growth of Soviet military procurement, measured in dollars, appears to have levelled off after 1976. But note the very high level that Soviet procurement had attained, has since sustained, and thus the large stock of military assets that the Soviet Union continues to accumulate (see Chart I.A.3). In 1984, the first time since 1969, U.S. military procurement appears to have exceeded Soviet military procurement, an important achievement. Our efforts to catch up are paying off. But Chart I.A.5 indicates that the job is not finished. Rebuilding the stock of military assets to forces comparable in value to those of the Soviets will require a sustained effort.

Chart I.A.4
***Percent Variance U.S. Defense Procurement Expenditures from a 20-Year Average** (FY 1965-1985)*



These basic facts, and their essential implications, were as clear to my predecessor as they are to me. As Secretary of Defense Brown said in the FY 1980 Annual Report:

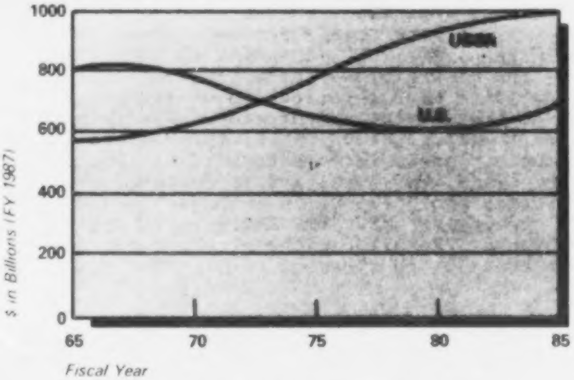
> ***Critical turning points in the histories of nations are difficult to recognize at the time. Usually, they become clear only in retrospect. Nonetheless, the United States may well be at such a turning point today. We face a decision that we have been deferring for too long; we can defer it no longer. We must decide now whether we intend to remain the strongest nation in the world. The alternative is to let ourselves slip into inferiority. . .***

---

[1] Average investment from FY 1948 through FY 1985 was $49.6 billion measured in FY 1986 constant dollars.

Chart I.A.5.

A Comparison of Accumulated U.S. Defense Procurement with the Estimated Dollar Costs of Accumulated Soviet Procurement[a]



[a]For each year, graph shows total procurement of the previous 15 years.

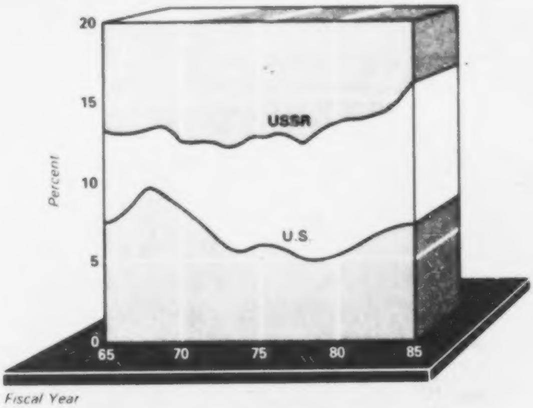
Can adequate security be ensured with U.S. forces that are in the aggregate inferior to those of the Soviet Union? Does a commitment to maximum feasible safety require U.S. military forces second to none? Whenever these questions have been put to the American people, they have answered them unambiguously. The United States cannot accept a position of overall military inferiority. We must do what is required to guarantee military strength second to none. We do not seek to mimic the Soviet Union in spending or to match them tank for tank, plane for plane, ship for ship. But we recognize that the Soviet Union threatens U.S. vital interests at many points across the globe. We must therefore take account of the global military balance with the Soviet Union. Moreover, because the global military balance affects Soviet perceptions, and the perceptions of allies and others, and even ourselves, it would be foolishly short-sighted for the United States to accept a position of global military inferiority to the Soviet Union. Maintaining the overall military capability we must have over the longer term will require us to invest roughly as much in our defenses as our primary competitor invests in its forces.

Can the United States afford this level of investment?

The single best measure of the defense burden on a national economy is the fraction of the gross national product (GNP) devoted to defense. In 1961, U.S. defense spending accounted for 8.3 percent of the GNP. When President Reagan took office in 1981, the share had fallen to 5.2 percent. At the end of President Reagan's first term, defense expenditures consumed 6.2 percent of the GNP. By the end of the current five-year plan, if fully funded, that figure would still be less than 7 percent of the GNP.

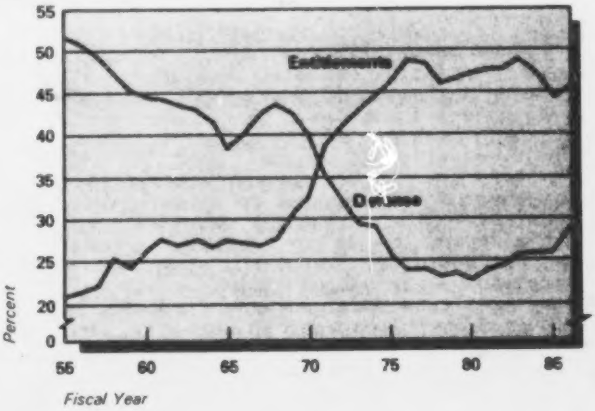
As Chart I.A.6 shows, the Soviet Union now spends more than twice the percent of its GNP on military arms as we devote to our defense. Fortunately, the United States is approximately twice as productive as the Soviet Union. If the United States were to devote the same percentage of its GNP to its military as the Soviets do, we would be submitting an FY 1987 defense budget not of $311.6 billion, but of some $700 billion.

Chart I.A.6
A Comparison of the Defense Fraction of U.S. GNP with the Estimated Defense Fraction of Soviet GNP



Moreover, since 1971, federal spending on domestic entitlement programs has far exceeded defense spending. If one compares non-defense entitlements with defense spending over the past 30 years (see Chart I.A.7), the percentages of the total federal budget

Chart I.A.7
Shares of the Budget — Outlays



accounted for by these expenditures have essentially been reversed. Indeed, since 1981, federal spending on entitlement programs has exceeded total defense spending by more than $750 billion.

The answer to this question is therefore inescapable. The United States can afford the level of security we require. Americans can choose not to pay the price of the safest feasible deterrent. But we cannot hide behind the excuse that we could not afford to be secure.

Is our defense budget being spent wisely and effectively?

This is a difficult question -- one that I ask myself every day. It is important to recognize that decisions about what we need and how much is enough involve difficult judgments based on many variables and factors not subject to precise mathematical computation. Just as companies make choices about areas in which to invest, or stockholders make decisions about what to buy and what to sell, the Department of Defense must make judgments about where to invest the United States' scarce defense resources. These judgments are careful and considered. They can also be controversial. Many of them require painful choices, for example, my decision last August to cancel the Army's air defense weapon (Divad) after $2 billion of investment.

This report attempts to explain the framework and principles that guide our judgments about how best to provide for U.S. security. But, we claim no monopoly of wisdom. As with any investment decision, hard choices can be reanalyzed, second-guessed, and debated. The Congress has a responsibility to examine our choices -- always recognizing, however, that while we debate without decision, the Soviets build.

The issue of DoD's efficiency must be addressed at greater length. From my earlier experience at the Office of Management and Budget, and in the private sector, I came to DoD keenly aware of the problems of fraud, waste, and abuse. Within days of taking office as Secretary of Defense, I instituted a sweeping reform of our acquisition process aimed precisely at these problems. As I said in 1981:

> ***Everyone in the Department of Defense — civilian and military alike — must be alert every day for opportunities to save more of the taxpayers' money, and to make efficiencies wherever possible. And I intend to make this effort a successful one!***

In initiating the most sustained attack on fraud, waste, and abuse in the history of the Department of Defense, I was conscious of an underlying irony. That irony has become sharper over time. A thoughtful summary of the matter appears in a case study entitled, "Fraud, Waste, and Abuse at HEW." It examines the efforts of former HEW Secretary Joe Califano to combat this problem in the late 1970s. The point of the case can be stated as the "fraud, waste, and abuse boomerang." When a manager seeks to expose fraud, waste, and abuse in his department as part of his strategy for controlling this problem, at least three results follow inexorably: the issue of fraud, waste, and abuse becomes more visible in his department (since the press will carry many more stories about the issue based on evidence uncovered by the manager's auditors); many people will conclude that the problem must be getting worse rather than better (since they will be hearing more about it); and some people will conclude that the present management of the department that began the search must surely be corrupt, profligate, incompetent, or all three. This case offers a prescient summary of events in the Defense Department.

In spite of these risks and consequences, we will persist in searching for and exposing fraud, waste, and abuse wherever we find them in our determination to give the American public the greatest possible return for every dollar of defense spending. We cannot escape the bad press that inevitably accompanies such an effort. But we continue to hope that, over time, more informed and less prejudicial observers will put sensationalized press reports in perspective.

It is not easy to keep the challenge of management at DoD in perspective:

-- Even if we achieved 99.9 percent purity in our contract actions, 15,000 of them would be defective. In an organization that signs 52,000 contract actions every working day, perfection is unattainable. Nevertheless, DoD is determined to minimize the number of defective actions.

-- DoD employs more than two million active uniformed Service personnel, one million reserve personnel and one million civilians, and another million private employees are under contract with DoD. In many ways, these people mirror American society, with its strengths and weaknesses. Like any population of five million -- even a select population -- DoD will always include a small percentage of people who yield to temptations of criminality, negligence, or simple sloth.

-- DoD buy goods and services from about 300,000 suppliers. Though we make a vigorous effort to avoid firms that fail to perform, the laws of probability make it inevitable that we encounter some bad apples.

Effective management of such a department requires dedicated efforts daily by thousands of people on many fronts. Our management program for getting the most for every dollar of defense spending can be summarized under three key themes: creating a system that demands performance, rejects defects, and punishes offenders; promoting competition wherever possible; and centralizing direction while decentralizing operations.

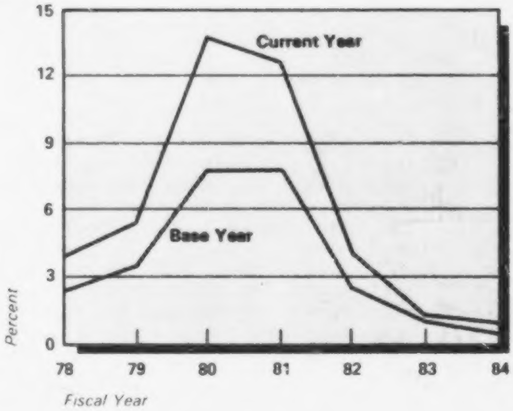
— Creating a System that Demands Performance, Rejects Defects, and Punishes Offenders.

How was this Administration able to get the highly-sophisticated B-1 bomber tested and delivered many months ahead of schedule? How has this Administration been able to procure and deliver to our forces hundreds of new M1 tanks after 20 years of delays, changes, and cost overruns in the main battle tank program? How were we able to get the ground-launched cruise missile (GLCM) and Pershing II ballistic missiles finished on time and deployed in Europe, in some cases within hours after our NATO allies' decisions to go ahead?

How has this Administration brought the spiraling rate of cost growth in our major acquisition programs under control? As Chart I.A.8 shows, the annual rate of growth for major weapons systems has dropped from a high of about 14 percent in 1980 to a low of less than 1 percent in 1984. (In constant dollars, the annual rate of growth dropped from 8 percent in 1981 to 1 percent in 1984.) The drop would be even sharper were it not for congressional reduction in the planned rate of acquisition, which of course increases the unit cost.

Chart I.A.8

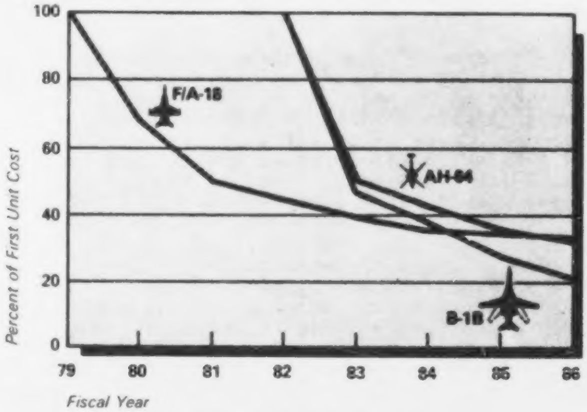
Annual Rates of Program Cost Growth for Major Weapons Systems



These favorable results were achieved by management and motivated leadership that minimized design changes and concentrated on efficient production. Indeed, today we are buying a number of weapons systems for less in real terms than they cost in 1981 and 1982. Chart I.A.9 summarizes the evidence for three of our most effective fighting systems: the B-1 bomber, the AH-64 helicopter, and the F/A-18 aircraft.

Chart I.A.9

Unit Cost Trends of B-1B Bomber, F/A-18 Fighter, AH-64 Helicopter[a]



[a] Costs are shown as a percent of the first unit's cost.

In creating a more responsive system, our first step was to unleash the most comprehensive set of audits and investigations in the history of DoD. Since 1981, more than 74,000 internal audits have been completed, identifying potential savings exceeding $9 billion. Most Americans are familiar with unfavorable procurement and spare parts stories that have surfaced over the past several years. Unfortunately, these stories rarely identify their principal source: namely, our own reports and press releases. Moreover, we have not only ferreted out these problems and exposed them to public scrutiny, we have put programs in place to minimize their recurrence. To monitor and control prices, we are continuing our aggressive audit efforts; we have instituted automated programs to uncover unwarranted price increases; we are buying in larger, more economic quantities whenever the Congress will let us; and we are making greater use of multiyear procurement, whenever the Congress permits.

We have also made it clear to industry that industry is part of the problem and must be part of the solution. I am pleased to report that the private sector has responded well. Some of our major suppliers have established their own spare parts awareness programs to solicit suggestions from their employees on ways to keep costs down and improve quality. They are voluntarily identifying items for improved competition or direct purchase from the actual manufacturer. Indeed, some of our larger manufacturers are now offering us the best refund policies I have ever encountered. If we think any item is, or has been, overpriced, we can return it for a full refund.

But we are not relying solely on the goodwill of industry to prevent abuses. Where we have discovered overpricing, we have sought and obtained refunds. We have not hesitated to suspend or debar contractors for improper performance. We have suspended or debarred more than 1,400 defense contractors since 1981. In cases of serious fraud or illegal activity, we have sought criminal indictments from the Department of Justice not only against the companies involved, but also against individual employees and officials who abused their trust.

We have an obligation to the American people to provide the best defense at the least cost possible. We will not compromise that obligation. We prefer to conduct our business in an atmosphere of mutual trust and respect, but we will be tough and demanding customers and will not tolerate the improper and illegal actions of the greedy few.

— Promoting Competition Wherever Possible

The most powerful force for efficiency in production is competition. In some cases, DoD is the only buyer of an item for which there can be but a single producer. A prime example is the Peacekeeper missile. Even in such cases, it is often possible to structure competition for the supply of components of a system, or of spare parts. By one of the most creative, vigorous, and sustained efforts ever attempted anywhere, we have made competition the hallmark of defense procurement.

How can we be buying B-1 bombers, AH-64 helicopters, and F/A-18 aircraft for less today than DoD was paying for those same planes and helicopters four and five years ago? Since 1980, the number of competitive contract actions has increased by 37 percent. Today, more than two-thirds of all contracts have been awarded on the basis of competitive bids. Only 28 percent of DoD's procurement dollars were awarded by noncompetitive contracts, and a number of those resulted from congressional restrictions prohibiting competition, for example, the M1 tank engine. In 1981, 26 percent of shipbuilding contracts were awarded competitively; today 90 percent are competitive awards. While several of my predecessors have sounded the theme of competition, this Administration has made substantial progress in implementing programs to increase competition throughout DoD, and we intend to keep at it.

We have assigned more than 600 competition advocates throughout the country to find new ways to bring increased competition to the defense marketplace. In FY 1985, as part of our spare parts reform program, more than 100,000 items were separated out from prime contractors for competition or were bought directly from the manufacturers, saving more than $500 million.

For more than 100 individual weapons systems, DoD has instituted a program of breaking out major components and buying them through competitive procedures. While this approach is not cost-effective for all components, it has resulted in prices at least 25 percent below contracts signed by our predecessors for the same components -- and in some cases, 75 percent below previous prices.

— Centralized Direction with Decentralized Operations

The idea that one secretary of defense, or a secretary and his appointees, can examine each of the 52,000 contract actions the department signs every day is, of course, an illusion. The secretary must give direction to the department, establish policy, and make the hard calls. An attempt to "micro-manage" the activities of more than three million uniformed Service personnel, and over one million civilian employees, would be impossible and self-defeating. The most difficult job for a secretary is to make the hard calls: saying "yes" to some items, and making that "yes" stick; saying "no" to others.

I have said "yes" to strategic modernization (in spite of the preference of some Services and many critics); to emphasizing combat effectiveness (readiness and sustainability) even when this conflicts with modernization and expansion; to making the all-volunteer Armed Services succeed (contrary to the predictions of many critics); and to demanding that the reliability and maintainability of our weapons systems be considered equal to cost, schedule, and performance during the acquisition process.

I have said "no" to delays, overruns, and procurement practices that result in overcharging; to weapons systems that will not work or cost too much, even though in past years we may have invested large sums in their development (for example, the Divad); and to the recurring temptation to acquiesce in, rather than meet the massive Soviet offensive military buildup.

Sustaining the Consensus

There is one group of critics for whom I cannot claim much sympathy, but whom I am beginning to understand. This group always argues that the defense budget should be cut by 10 percent -- whatever the level of spending happens to be. They attach their refrain -- "cut the defense budget" -- to the concern of the day. So when the press is reporting cases of waste, or the deficit, or whatever, that becomes their reason for seeking cuts.

Today, these people argue that by trying to do so much so fast, the Reagan Administration squandered the political consensus supporting the revitalization of our defenses.

But examine the facts. Before President Reagan entered office, what was the longest series of real annual increases in the defense budget since World War II? How many years in a row did the defense budget grow?

The answer is three years. During the war in Vietnam, the series of real annual increases in our defense strength reached three, and then it turned down before the war was over. Moreover, much of that added strength was lost in the Vietnam war. From the mid-1960s until the final years of the previous administration, Soviet defense investment increased about 4 percent every year in real terms. Through the decade of the 1970s, U.S. defense investment fell by more than 20 percent. Almost too late, the previous administration, prodded by the Congress, began to reverse course.

My first budget came after two years of real, albeit inadequate, increases in U.S. defense budgets . The President and I were aware from the historical record that the consensus supporting defense spending had in the past proved short-lived. By all peacetime precedents, the President's first defense budget would have been the third and last defense increase this "consensus" would have sustained. But, rather than losing that consensus, we have maintained it for four years of real additions to our military strength. I am proud to report that with broad bipartisan support from the Congress, the 1985 budget marked the sixth year of sustained, real increases in our defense budget. Of course, I am not pleased that world conditions and the continuing Soviet buildup required those expenditures. But I remain hopeful that as the Soviet leadership sees our determination not to allow them to achieve a military advantage, they will become more realistic about real, verifiable arms reductions.

In FY 1986, the Congress interrupted the long-term restoration of U.S. strength and cut the defense budget. The principal cause of this pause, however, was not some loss of consensus about the need for defense. The cause was alarm about the deficit. In FY 1987, the President and the Congress are required by law to cut the deficit sharply. President Reagan is equally committed to returning to our program of three percent real increases in funding for defense programs. This path of sustained, real growth in our defense effort is necessary to build the programs essential to safeguard our security at a prudent level of risk in an uncertain world.

To conclude, given the stakes and the uncertainties, the United States should accept nothing less than maximum feasible security; that level of national security will require military forces second to none. Fortunately, we can afford adequate security if we make our investments wisely, and manage defense programs to maximize the return for every dollar.

The chapters that follow proceed from this overview to present our defense policies and programs. Our goals, national security objectives, and strategies are summarized in Chapter I.B. Chapter I.C then reviews how far we have come toward these objectives in the first five years. The threats to the United States and its allies are assessed in Chapter I.D. And finally, Chapter I.E states four pillars of our defense policy for the 1990s and beyond.

B. UNITED STATES GOALS, NATIONAL SECURITY OBJECTIVES, AND STRATEGY

1. Overview

The fundamental goals of the United States are stated in the Constitution:

> ***. . . to form a more perfect Union, establish justice, ensure domestic tranquility, provide for the common defense, promote the general welfare, and secure the blessings of liberty to ourselves and our posterity.***

To ensure our freedom and our democratic institutions, as the Declaration of Independence states:

> ***. . . we mutually pledge to each other our lives, our fortunes, and our sacred honor.***

As we approach the last decade of the 20th century, the basic goals of our national security policy remain essentially unchanged since the late 1940s:

-- To preserve the independence, free institutions, and territorial integrity of the United States;

-- To preserve U.S. and allied vital interests abroad; and

-- To shape an international order in which our freedoms and democratic institutions can survive and prosper -- an international order in which states coexist without the use of force and in which citizens are free to choose their own governments.

To these ends, after World War II, the United States developed a national strategy combining political, economic, and military elements. At that time, the primary threat to our national security was the Soviet Union. Our national strategy to counter that threat was containment: to contain Soviet overt aggression or subversion against our vital interests, and to contain it for a period long enough for the internal contradictions of Soviet communism to emerge. The basic defense strategy by which we attempted to implement the military component of containment was deterrence. In essence, that meant maintaining military forces and the determination to use them in ways that would make the costs of aggression against our vital interests substantially greater than any benefit the aggressor could hope to achieve.

Our national strategy was, of course, more complex than military deterrence. It included three additional, interrelated strands:

-- Political: to promote democratic institutions, not just by example, but by the reconstruction of our two principal World War II adversaries as political democracies, and by encouragement of democratic institutions around the world;

-- Economic: to create an international economic system for money, trade, and aid, embodied in Bretton Woods, the International Monetary Fund, the General Agreement on Tariffs and Trade, and the World Bank, backed by cooperative arrangements to promote growth in the world economy and to prevent occurrences like the Great Depression that brought Hitler to power; and

-- Geopolitical: not just to prevent domination of other economic-industrial centers by a hostile power, but to create an alliance of industrial democracies joined with the United States in collective security compacts.

With what results? We Americans have a tendency to lose sight of accomplishments in focusing on current problems. Some Americans only feel comfortable if they blame America first and foremost for the ills of the moment. Since international economic order was established in the late 1940s, the world economy has grown faster and for longer than at any previous period in history -- from approximately $1 trillion in 1950 to more than $10 trillion today. This growth was fueled in substantial part by the economic order and the technological progress of the United States.

Even more significant has been the success of our alliance system in securing for each member the most vital of all national interest. For four decades this system has preserved each member's integrity, protected all from external threats and pressure, and provided an environment in which each state has had considerable opportunity to develop along its chosen path. Germany and Japan are now leading members of the community of democratic nations.

Indicators of domestic political development and individual freedom are difficult to formulate. But the past four decades compare quite favorably with the four decades that preceded them, or with any other four decades of the modern period, in the growth of democratic institutions and the extension of individual freedoms. The community of nations who share the commitment to the political values we hold most dear have never been more vigorous in comparison to their adversaries. When have these values -- freedom of individual citizens, democratically chosen governments, market economies, and a lawful international economic and political order -- had greater appeal to large numbers?

It is important to recognize progress as well as challenge. To critics who assert that today's problems are too demanding, today's burden too heavy, my response is: while the challenge is great, the Soviet threat is more focused than at any point in the past 40 years.

In 1946, when Ambassador George Kennan sent his "long telegram" from Moscow proposing a policy of containment, what was the problem? It was the fear that Soviet communism would prove an ideological firestorm -- sweeping key countries in Europe or Japan much like Islam spread in the seventh century. Demoralized by a devastating war, exhausted economically, and threatened by communist parties within, several countries in Europe and Asia seemed especially vulnerable to communist ideology. In the first phase of containment, therefore, the U.S. objective was ideological containment: preventing a combination of ideological appeal and internal subversion from seizing power in nations vital to U.S. interests.

In 1986, as we watch the embers of communist ideology burning low, this threat has been met. Never since 1917 has communist ideology appealed less and to fewer, and for better reasons, than it does today.

The second phase of containment can be labeled geopolitical containment. Though rarely articulated, U.S. behavior in World Wars I and II reflected our fundamental interest in preventing the Eurasian landmass from being dominated by a hostile power. The charter for this second phase of containment -- a National Security Council memorandum (NSC 68) written in 1950 -- is explicit about this objective. U.S. vital interests would be jeopardized if the Soviet Union succeeded through intimidation, or outright aggression, in dominating either Europe or Japan. The addition of the military-industrial capacity of Europe or Japan to that of the Soviet Union would pose an unacceptable threat to the United States.

Viewed from the mid-1980s, geopolitical containment has also been a striking success -- beyond any expectations of the 1950s. Not only has the Soviet Union failed to dominate Eurasia, but Western Europe and Japan have become partners of the United States in alliances that share the burden of containment.

Today, we face the challenge of the third phase of containment: containment of the Soviets' massive military power. Having failed to achieve its ideological or geopolitical ambitions, the Soviet Union in the early 1960s, launched the largest military buildup in world history. By a truly gargantuan effort -- now consuming more than 15 percent of its gross national product -- the Soviet Union has become a one-dimensional superpower. The issue today is whether the United States and its allies are prepared to permit the Soviet Union to establish military superiority it can use for territorial or political advantage.

The Reagan Administration has said "no." With broad bipartisan support, we are rebuilding American military strength to address precisely this challenge. But success in meeting the challenge of Soviet military growth is not yet assured. Whether a decade hence, it will be written that we succeeded in persuading the Soviet Union that we would never permit it to achieve exploitable military advantage against our vital interests -- or, alternatively, that we flagged and failed and thus encouraged Soviet risk taking -- all that depends on what we do now.

2. Planning U.S. Forces: The Shape of the Problem

The process by which DoD decides which military forces to buy is extraordinarily complex. Literally thousands of individuals spend millions of hours each year making calculations and judgments about the complex chain of means and ends for achieving U.S. security objectives.

The complexity of this process should not obscure its basic logic. How should we decide how many divisions of troops or how many strategic nuclear forces we should have? The problem is one of matching means and ends with an eye to budget constraints. The ends are our national security objectives and foreign policy interests. The means for achieving these objectives are military forces capable of performing specific actions in particular contingencies. Thus, we should buy the requisite military forces, choosing among alternatives to purchase the capabilities vital to us at the lowest cost -- or to provide the greatest capability for any given budget.

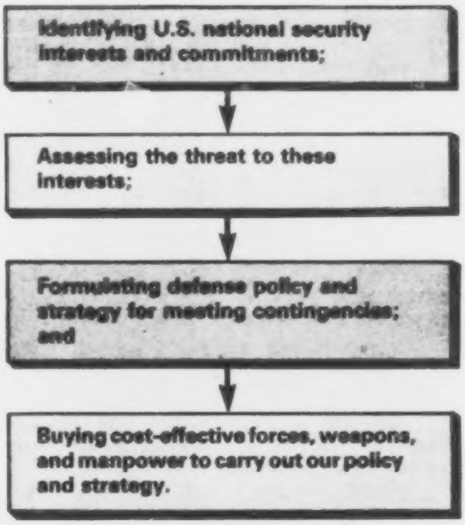
An example will illustrate this process. U.S. vital interests in Europe are recognized in the NATO treaty, which states that an armed attack against one of the parties "shall be considered an attack against them all." The primary threat to Europe comes from the Soviet Union and its Warsaw Pact allies. The Warsaw Pact confronts NATO with massive conventional forces, a sophisticated array of theater nuclear forces (including the new SS-20), and strategic nuclear forces. In designing U.S. forces, it is not enough to identify the general threat.

One must consider specific contingencies. Toward that end, the NATO allies examine a broad array of possible Warsaw Pact attacks against Western Europe, from a limited effort to cut off Berlin to a full-scale offensive.

The logic of the process is summarized in Chart I.B.1.

Chart I.B.1

Planning U.S. Forces: The Logic of the Problem


Identifying U.S. national security interests and commitments;
Assessing the threat to these interests;
Formulating defense policy and strategy for meeting contingencies; and
Buying cost-effective forces, weapons, and manpower to carry out our policy and strategy.

At the third step, the task grows even more difficult. Defense policy consists of complex judgments about a large number of interrelated issues, including enemy capabilities; the capabilities of U.S. allies; pre-attack warning; deployment strategy; performance against enemy forces; length of war; possible escalation to nuclear warfare; and the likelihood of additional contingencies occurring simultaneously. The NATO alliance's current judgments about these issues are embodied in a classified document, MC 14/3, adopted by the NATO Defense Planning Committee in December 1967.

The fourth step is to determine the numbers and types of weapons and troops required to fulfill the chosen strategy. To pursue the NATO example, our strategy of flexible response implemented through defense policies covering the array of issues sketched in step three has led NATO to bolster its forward defense. To stop a massive conventional attack without escalating quickly to nuclear weapons, NATO forces require more timely intelligence, greater mobility in order to shift to the area of the attack, and increased conventional firepower, especially against Warsaw Pact tanks. The M1 tank, Bradley Fighting Vehicle, improved TOW vehicle, and A-10 aircraft give the battlefield commander some of the combat systems needed to implement the "air-land battle" concept.

Today, NATO is taking advantage of emerging technologies such as smart tank-killing artillery rounds, the multiple-launch rocket system (MLRS), and enhanced command and control capabilities to enable the commander to destroy second echelon Warsaw Pact forces before they are committed to the battle. The commitment of NATO allies to real increases in defense spending, including acquisition of technologically advanced conventional systems, reflects NATO's determination to improve the conventional deterrent, thereby reducing reliance on the use of nuclear weapons. At the same time, the alliance's deployment of ground-launched cruise missiles and Pershing IIs in response to the threat created by the Soviet deployment of SS-20s also fulfills NATO's commitment to maintain a stable deterrent -- not permitting the Soviets a decisive advantage at any important point on the spectrum of conflict.

The logic of defense planning should be clear. The need for military forces arises from U.S. security interests and commitments. These interests are threatened by adversaries in ways that create contingencies that U.S. forces must be able to meet. Defense policy judgments about the manner and method of U.S. responses are translated into requirements for specific forces that are designed to provide the necessary capability at the lowest cost.

It is a mistake, however, to imagine that there exists some precise numerical standard in the calculus of deterrence. Pretension to false precision in calculating the forces we need not only fuels confusion, it promotes a dangerous arrogance. The attempt to select the means that will best achieve our goals is complicated by five additional factors.

The first is inherent uncertainty about the future. The weapons we are buying today will provide the backbone of U.S. military forces well into the 21st century. Against which potential adversaries may these weapons be used? How strong will our enemies be? What weapons will they use? If the future resembles the past, the assumptions our planners make about which contingencies we will face, how specific weapons will perform in wartime, and what exchange calculations can be anticipated may prove to be inaccurate. Prior to the fact, most planners' calculations showed that France would successfully resist the German attack in 1940, and that the British would lose the air battle in a month. France fell in seven weeks, and the British won the Battle of Britain. Thus, while we attempt to analyze numbers and capabilities of opposing divisions, aircraft, tanks, and antitank munitions, such calculations are only approximations -- not infallible guides to our real needs. In the face of uncertainty, prudence requires that one hedge against the risk of being wrong.

Second, if the United States' only purpose were to protect its interests by the use of force, the problem would be simpler, since weapons and numbers could be chosen with exclusive attention to defeating the enemy. In fact, we seek to achieve our objectives not by the use of force, but rather by preventing an adversary from using its forces against us. We do this by the threat of our response. Our deterrent strategy must therefore address our adversaries' perceptions and calculations. In a world in which the elements of military power are ever changing, and the mechanisms of threat and deterrence are not well understood, the United States must nonetheless attempt to choose forces that will deter its adversaries.

Third, the United States cannot solve its weapons riddle without considering the possible responses of its adversaries. Our weapons acquisition and force structure decisions also affect our opponents' decisions about their military forces -- by suggesting possible technologies, by encouraging emulation, and by provoking reactions. We must recognize that our adversaries' reactions could pose problems for us that would require further responses and take this into consideration as we formulate our defense decisions. Thus arms reduction agreements that verifiably constrain Soviet armed forces can advance our interests, and we strongly support such agreements.

Fourth, in acquiring weapons, we do not select from a fixed menu. The extraordinary pace of technology generates new weapons each decade, but their design, testing, and acquisition take from 7 to 12 years. Since new weapons can be developed by our adversaries as well (frequently much more rapidly because there is no public debate involved in their development), prudence requires that we invest across the spectrum in research and development to limit surprise. We thus regularly face the difficult problem of tradeoffs between today's capability and tomorrow's possibilities, uncertainties, risks, and costs.

Finally, the question of "how much is enough" cannot be answered independently of the first four factors, but neither can it be answered with reference to these factors alone. We recognize the inevitable tradeoffs among defense, domestic programs, and private consumption.

This outline of the problem underlines one clear conclusion: defense planning is extraordinarily complex -- so complex that reasonable individuals can reach different conclusions about the right solution. There are so many variables to be weighed, and hard judgments to be made, that unanimity is unattainable. Disagreement and debate is a source of strength in our democracy. Members of the Congress, especially members of the committees most concerned with defense, should act as an informed board of directors for the nation's shareholders -- reviewing DoD's plans, programs, and performance. But boards of directors reach conclusions and either authorize management to proceed, or demand presentation of new proposals for quick decision. Endless debate is not a strength. It can be a weakness that totalitarian adversaries exploit.

3. United States Defense Strategy: Deterrence

To what strategy is the ongoing reconstruction of American military strength aligned? In a word, our basic defense strategy is deterrence. This word has been repeated so often that we frequently fail to consider what it actually means. It means that we seek to protect our vital interests by being strong, not to enable us to resort to aggression or war, but to prevent war by our very strength. We seek to prevent war by persuading potential adversaries that the costs of attacking us will exceed any gain they could hope to achieve. This is the core of our defense strategy today, as it has been for most of the postwar period.

Too often the concept of strategy is misunderstood. The term emerged in a military context in which strategy is distinguished from tactics. Military strategy is the art of projecting and directing the larger military movements and operations of a campaign to secure objectives of national policy. It reminds us that it is possible to win the battle and lose the war.

More recently, this concept has been adopted by the American business community and has been enlarged to incorporate the broad formula that defines what business the firm is in, its basic goals, and its major policies for achieving those goals. Strategy combines the ends (goals) toward which a firm is striving and the means (policies and programs) by which it is seeking to get there. The essential notion of strategy is captured in the relationship of means to ends -- the combination of purpose and policies that guide the enterprise.

The use of this concept by American business recognizes that strategy, like policy, is an accordion word. It stretches from plans that define what business a firm is in to the plan of action for penetrating a new market. In addition to the broad goals of the firm, strategy encompasses key operating policies by which the firm seeks to achieve its goals in each functional area: finance, research and development, manufacturing, and distribution. Effective corporate strategy must balance the goals of the organization with its internal operating capabilities on the one hand, and its external opportunities and threats on the other. A sustainable corporate strategy must match the particular strengths of the corporation with competitive forces in its markets.

Management of America's defenses requires an enlarged conception of strategy that includes connections between ends and means at every level, from an army division in the Republic of Korea, or a carrier task force in the Mediterranean, all the way to the President of the United States. For example, to meet the threat of Soviet aggression against Europe, the NATO alliance has a strategy adopted by the governments of its 16 member nations. Labeled "flexible response," this strat[illegible] encompasses a triad of conventional, theater nuclear, and strat[illegible]clear forces in a posture of forward defense. Similarly, each of our unified and specified commands has a strategy for achieving its assigned missions. Each is but a component of our larger defense strategy. Thus, in considering the question, "What is our strategy?" it is necessary to analyze the strategic coherence of successive layers of linked means to ends.

We begin with the question: What are we trying to do? The mission of the Department of Defense is to preserve U.S. and allied independence, integrity, and freedom, and our vital interests. We seek to achieve these objectives first without war, but if deterrence fails, by fighting to restore the peace. Our basic strategy is to maintain ready, mobile, and expandable forces that persuade potential adversaries that the costs of aggression against us will substantially exceed any benefits they could hope to gain.

Effective deterrence must meet four tests:

- -- Survivability: our forces must be able to survive a preemptive attack with sufficient strength to threaten losses that outweigh gains;
- -- Credibility: our threatened response to an attack must be credible; that is, of a form that the potential aggressor believes we could and would carry out;
- -- Clarity: the action to be deterred must be sufficiently clear to our adversaries that the potential aggressor knows what is prohibited; and

-- Safety: the risk of failure through accident, unauthorized use, or miscalculation must be minimized.

This basic strategy has been implemented through four major operating policies that constitute the cornerstones of defense policy: balance of forces adequate for each mission; alliances for collective defense; forward-deployed forces; and flexibility.

a. Balance of Forces Adequate for Each Mission

The Department of Defense must maintain the capabilities to perform an array of key missions: nuclear deterrence; defense of vital interests in NATO, Northeast Asia, and Southwest Asia; protection of the sea lines of communications; and power projection. Deterrence is inherently dynamic, since the capabilities of our adversaries' offensive forces pose the threat we must be able to meet. As Soviet forces have expanded, the challenge of maintaining a balance of forces adequate for each mission grows more severe. For example, for most of the postwar period, the Soviet navy concentrated primarily on coastal defense and posed little threat to U.S. lines of communications with Europe and Japan. In the past decade, however, the Soviets have acquired a "blue water navy" capable of threatening U.S. sea lines of communications. Had the United States failed to respond by strengthening our own naval forces, we would no longer have the capability to achieve this vital mission.

Nowhere is the challenge of maintaining an adequate balance of forces clearer than in the area of U.S. conventional forces. As the Soviet Union acquired nuclear capabilities equal to our own, the credibility and prudence of relying on nuclear threats to respond to conventional attacks weakened. Secure deterrence requires that the United States and our allies maintain a balance of conventional forces able to meet and fight for a sustained period against a conventional Soviet attack in Western Europe, Northeast Asia, and Southwest Asia.

An adequate balance of conventional forces does not require equal numbers of tanks, aircraft, or infantry. A defensive posture has inherent strengths vis-a-vis the aggressor. Moreover, we and our allies have a number of advantages that can serve as force multipliers including the quality of our manpower, emerging technologies that make possible new conventional weapons systems, and flexibility in organization and tactics. Together these ingredients are producing a less heralded but vitally important revolution in conventional defense.

The effect of our ongoing revolution in conventional defense capabilities and operational doctrine can best be seen in recent developments in NATO. Its strategy of flexible response has sought first to deter war, and if deterrence should fail, to bring the conflict to a satisfactory resolution with a minimum number of casualties and without the loss of NATO territory. Currently, the Warsaw Pact would enjoy a very favorable balance of conventional forces at the beginning of a conflict. The key to a successful alliance defense, therefore, is to deny the Pact the momentum needed to create a major breakthrough of the forward defensive positions by destroying their follow-on forces. NATO military commanders have always sought to target these follow-on forces, but have lacked adequate target acquisition resources and conventional weapons systems with sufficient range and accuracy. Emerging technologies and recent conventional defense improvements are making it possible to locate and attack the enemy follow-on forces at greater depths with precision munitions, thus destroying their momentum and defeating the attack without resorting to nuclear weapons.

In the area of low-intensity conflict, these same new conventional defense initiatives and emerging technologies are creating light combat forces with much greater mobility and lethality. The Army's five new light-infantry divisions will provide the President with a small hard-hitting force that can be deployed anywhere in the world to prevent limited war from becoming a major conflict.

Our goal, therefore, is to achieve a credible conventional deterrent. This is the first line of defense in a secure spectrum of deterrence that encompasses conventional, intermediate nuclear, and strategic nuclear systems. The closer we come to a credible conventional deterrent, the closer we are toward achieving President Reagan's more secure and safer world.

b. Alliances for Collective Security

U.S. alliances, treaties, and agreements serve not only to define clear lines against aggression. By combining the resources of many nations, collective security arrangements also share the common burden. Our alliances with the nations of Europe, Asia, and our own hemisphere, together with other important security relationships in those regions and in the Middle East and Southwest Asia are critical strands in U.S. strategy.

Our commitment to alliances stems from motivations fundamentally different from the classic 19th century concept of alliance or the Soviet satellite system. Earlier alliance structures were built on temporary calculations of interests to preserve a balance of power. The present Soviet system is driven by imperial domination. The United States has sought permanent alliances among nations sharing similar democratic values. While there are areas of disagreement with our allies, these are differences among friends who together promote each other's security and preserve their common democratic values.

We have vital interests in Western Europe. Moreover, the cohesiveness of the Atlantic alliance contributes to the deterrence of Soviet aggression throughout the world. Similarly, U.S. and allied strength and determination in other regions affect the security of NATO. Assured access to the critical raw materials and energy resources in Africa, Latin America, and the Middle East; secure transit over the critical sea lanes that link the free industrial economies with these resources and with each other; and the confidence that each ally will do its part in deterring Soviet global ambitions are fundamental to free world security.

No less than in Europe, the United States has vital interests in Asia and the Pacific. We are actively encouraging our allies there to take more responsibility for defending themselves, thus providing greater regional security. We continue to strengthen our relations with nations in the Middle East and Southwest Asia in an effort to deter Soviet aggression and maintain access to the region's resources, while promoting the search for a lasting Arab-Israeli peace. Although we have no formal alliances in the Middle East, we are expanding our security relationships with regional states in pursuit of mutual interests.

Perhaps our most significant efforts to promote security, stability, and democracy in the near-term have been in Central America and the Caribbean. Despite the efforts of the Soviet Union and its proxies to take advantage of the region's social, political, and economic problems, we have been able to assist in the movement toward peace and democracy. El Salvador is a good example. There, in the face of determined internal subversion and external aggression, the brave people of El Salvador have democratically elected a government that is fighting for Salvadoran independence. Judiciously spent dollars for security assistance can often produce a larger return than those same dollars spent for our own forces. If we fail to provide the assistance necessary for local forces to prevail against these threats, the risk of regional destabilization will correspondingly increase.

c. Forward-Deployed Forces

Deterrence of aggression is strengthened by our strategy of forward defense. To that end, we deploy ground and air forces in Europe, Japan, and Korea, and naval carrier battle groups and amphibious forces in the western Pacific, the Mediterranean Sea, and the Indian Ocean.

Forward deployment of our forces makes them immediately available for combat in coalition with our allies, permits their integration with allied forces in peacetime, and represents a clear manifestation of the U.S. commitment to the common defense. In essence, forward deployment gives unmistakable credibility as well as increased capability to U.S. participation in the first line of our common defense. It is sometimes suggested that we should bring the troops home to save money. Every study of this issue, however, has found that it is more expensive to bring our forces home and keep them here than it is to maintain them abroad.

Our conventional deterrent posture is strengthened by the integration of allied command structures in NATO and Korea; by the U.S.-based strategic reserve of general purpose forces; and by periodic exercises that demonstrate our rapid deployment capability and help to coordinate U.S. and allied forces. For these reasons, forward deployment has been a consistent and substantial component of our deterrent strategy for more than three decades.

d. Flexibility

Few illusions are more resilient, alluring, and dangerous than the idea that we can forecast with confidence all the threats we will face. Technicians seek certainty. But if the past is any guide to the future, it will be the unanticipated conflict in an unexpected place or form that poses the most difficult challenge. In structuring an adequate deterrent, we must prepare to cope with threats across the entire spectrum of conflict.

No one can adequately prepare for the unknown or unexpected. But we can attend to issues of warning and of learning. If we are to make use of intelligence warnings of enemy attack, we must expand our options for prudent and effective responses. For example, many of the preparations for reinforcing our forces in Europe had been based exclusively on a rigid timetable that assumes a certain period of advance warning, prompt political decisions to initiate reinforcement, and a sufficient number of days before the outbreak of hostilities to complete the reinforcement. For some of the most likely contingencies, however, this timetable may not be realistic. This Administration therefore initiated a NATO study and is now implementing follow-up measures to ensure that our planning recognizes that warning is usually ambiguous, and that this would impede the difficult political decisions to assemble and move large forces. For regions other than

Europe, we also need effective responses to ambiguous warnings -- responses whose costs and consequences make it acceptable to carry them out repeatedly, if necessary.

Learning is another key element of flexibility. An important lesson derived from past wars is that actual military engagements develop quite differently from what had been expected. Forces therefore need to be built with a capacity for learning. And since a future war may not be of sufficient duration to permit much learning, we must study carefully the lessons of those armed conflicts that do occur, such as Grenada or the Falklands, or the air war between Israel and Syria, for clues about tactics and operations.

A final element of flexibility is mobility. New Soviet outposts in many regions of the world make it possible for the Soviet Union to threaten friendly nations, directly and through surrogates, in places where we have no shield of land-based forward deployment. The spread of Soviet military outposts is aggravated by improved Soviet capabilities for projecting power, particularly in regions close to the Soviet Union. In the Persian Gulf, for example, the Soviet military now has an encircling ring of bases in Ethiopia, Aden, and Afghanistan. In addition, the reach of Soviet airlift and the Backfire bomber permit the Soviets to project military power to every part of the Middle East and to critical regions of the Pacific. The Reagan Administration has therefore accelerated efforts to improve support facilities, access arrangements for deploying U.S. forces, and prepositioning of essential equipment, while expanding U.S. airlift and sealift capabilities. The addition of three carrier task forces and two new Army light divisions underscores our commitment to mobility and flexibility.

4. U.S. Defense Strategies: Reagan Administration Revisions and Additions

To the basic defense policies that have guided defense planning since the 1950s, the Reagan Administration has made several revisions and additions. The principal difference between the Reagan Administration's defense program and its immediate predecessor's is our determination to ensure a balance of forces adequate for credible deterrence. The largest problem with the defense posture and strategy we inherited arose from a 20-year Soviet arms buildup that had been accompanied in the decade of the 1970s by a 20 percent reduction in the U.S. defense effort. The global military balance was shifting in favor of the Soviet Union. Through an investment nearly 50 percent larger than our own, the Soviets were buying advantages in virtually every area of comparison -- in nuclear forces, in the NATO-Warsaw Pact balance, and in Southwest Asia.

The most important truth about the recent buildup is that we have been buying and fielding forces to implement policies and strategies over which there was little disagreement between this Administration and its predecessor. Our principal difference arose from our judgment about the importance of funding these programs at levels adequate to achieve our stated objectives as quickly as possible.

The differences between the basic strategy, the missions, and the operating policies stated in my predecessor's last Annual Report and our current plans are much narrower than the gap between the Carter Administration's reluctance, and this Administration's determination, to fund our defense strategy to achieve a secure deterrent. In the face of major Soviet advantages in capital assets purchased since the 1970s and a continuing Soviet military buildup, and in light of

U.S. congressional demands for deficit reduction, maintaining balances of forces adequate for the missions essential to our vital interests remains our largest challenge.

As we continue to strive to meet that test, we are doing so in ways that reflect a more complex concept of deterrence. The basic concept has been extended to give greater emphasis to three interrelated ideas. First, effective deterrence must address not just the objective facts of the military balance sheet, but also Soviet leaders' perceptions of the facts. It is not sufficient for us to believe that the costs we will impose in response to an attack will exceed the benefits the Soviet leadership hopes to achieve. Interpreting the facts within their own frameworks, the Soviet leaders must conclude they cannot advance their objectives by attacking us.

Second, risk is the key issue in defense planning. How much should we pay for an "insurance policy" to reduce the risks of a catastrophe? How much risk can we afford?

Third, deterrence is multilayered. The layers include defense, escalation, and retaliation.

a. Perceptions

Recognition that an adversary's perceptions are an essential dimension of deterrence is not a new idea. As the Scowcroft Commission stated:

> ***Deterrence is the set of beliefs in the minds of the Soviet leaders, given their own values and attitudes about capabilities and will. It requires us to determine, as best we can, what would deter them from considering aggression, even in a crisis.***

Incorporation of this insight in operational defense planning for deterrence presents formidable intellectual and institutional problems we have not yet fully resolved. Because of our relative ignorance of Soviet perceptions, U.S. planners tend to rely on their own calculations of expected exchange ratios as an adequate surrogate. But all the evidence we have suggests that preparing to deter an attack only by assembling forces adequate to deter us under similar conditions could provide too little to deter the Soviets. For example, many strategic analysts have opposed this Administration's modernization of strategic nuclear forces with the argument that such investments are "sterile," since the marginal gain in attack and retaliation calculations is relatively small for the level of investment. The issue for a strategy of deterrence that takes perception seriously, however, is whether the Soviet leadership shares the judgment that additional expenditures are pointless. The fact that for the past decade Soviet investment in strategic forces (as measured in dollars), has been two to three times the size of our own investment, would suggest that they do not. Moreover, our forces must be adequate not only to deter Soviet aggression, but also to be seen by our allies and ourselves as sufficient.

By making additional investments in our intelligence capabilities, the Reagan Administration is improving our ability to understand how the Soviets assess the military balance. One of the most useful threads in our research, development, and deployment decisions has been the increasing emphasis given to analyzing and understanding perceptions of the Soviet leadership.

b. Risk

Risk is the key issue in defense planning. Unfortunately, many discussions of deterrence are led astray by a misunderstanding of this concept. For example, consider the argument that because our current capabilities are insufficient to meet all our commitments, we must cut back our commitments. Our commitments are based on our interests. But we can never afford to buy capabilities sufficient to meet all of our commitments with 100 percent confidence. The critical questions are: What risk of failure are we prepared to accept in our plans for meeting particular contingencies? How much are we prepared to pay to reduce this risk?

c. Multilayered Deterrence

Deterrence is a multilayered concept. The way in which we persuade the Soviet leaders that the costs of an attack would exceed any benefits they might hope to achieve includes three layered components: defense, escalation, and retaliation.

-- Defense: if the adversary calculates his aggression is likely to fail in its own terms, he will not attack;

-- Escalation: the adversary must know that even if his aggression should succeed in achieving its immediate objectives, he faces the threat of escalation to hostilities that would exact a higher cost than he is willing to pay; and

-- Retaliation: if the adversary confronts a credible threat that aggression will trigger attacks by a surviving U.S. retaliatory capability against the attacker's vital interests that result in losses exceeding any possible gains, he will not attack.

Of the three layers, the safest and most reassuring is defense. Our "warfighting capability" to defeat an attack and restore the peace is therefore not something separate from our strategy of deterrence. In fact, it forms the foundation of effective deterrence. If an adversary believes that his attack could be defeated at a low level of violence, and at low risks, why would he attack? We understand that the costs of maintaining the capability to meet every contingency effectively on its own terms can be prohibitive. Thus the United States must maintain a credible threat both of escalation and of retaliation to secure deterrence across the spectrum of potential conflict.

d. Pillars of Defense Policy

The Reagan Administration has reaffirmed the basic U.S. defense strategy of deterrence and the four cornerstones of defense policy: balances of forces adequate for each mission, alliances for collective defense, forward-deployed forces, and flexibility. In challenging ourselves, our colleagues in the Administration, and the broader strategic community to reassess the conceptual arsenal of the 1960s and reach out for new ideas, our aim is to find ways to make this strategy of deterrence more effective. To this foundation, we have added four pillars of defense policy for the 1990s that attempt to address the most important changes in the strategic environment that have occurred since the 1960s. These four pillars are:

-- Secure nuclear deterrence and the Strategic Defense Initiative;

-- Secure conventional deterrence and uses of military force;

-- A strategy for reducing and controlling arms; and

-- Competitive strategies.

Each pillar is discussed at greater length in the final chapter of Part I. Here, a brief paragraph summary of each will suffice.

Secure Nuclear Deterrence and the Strategic Defense Initiative (SDI)

The United States' conception of the role of nuclear weapons in defense strategy emerged in an era of American nuclear superiority. Now that Soviet nuclear forces are at least equal to our own, and in many dimensions superior, some earlier ideas are outmoded. The Reagan Administration has therefore given highest priority to reducing the threat of nuclear war, reducing reliance upon nuclear weapons, and continuing the development of options that provide the President a range of choices other than surrender in response to a Soviet attack.

The President's SDI is not only a natural extension of the search for alternative ways to ensure deterrence; it is the logical culmination of that search. This research program is going well enough now to make it seem unlikely that our security in the 21st century will depend on benign acceptance of mutual vulnerability.

Secure Conventional Deterrence and Uses of Military Force

Recognizing that without public support we cannot sustain any actions necessary to keep the peace, we therefore must develop realistic criteria for the use of force. The realities of our democratic system impel us beyond earlier doctrines of limited war. A democracy is naturally cautious and reluctant to use force as a ready adjunct of diplomacy. This puts a premium on forces adequate to deter aggression, at all levels.

A Strategy for Reducing and Controlling Arms

This Administration's strategy for reaching agreements with the Soviet Union that reduce arms, not legitimize increases in weapons, focuses on Soviet incentives. Why are the Soviets now beginning to think about real reductions in their own strategic offensive forces? We believe it is because of their knowledge of our renewed military strength, and their judgment about what we will do in the absence of such agreements. In addition to negotiated treaties to reduce numbers of weapons, this Administration is committed to a further array of initiatives that control nuclear arms and reduce the risks that they might ever be used -- initiatives aimed at removing ambiguities, misperceptions, and misunderstandings.

Competitive Strategies

How can the United States hope to achieve its objectives while making an approximately equal level of effort as the Soviet Union? This Administration has promoted the search for competitive strategies at every level in our defense program. Competitive strategies capitalize on our long-term strengths in ways that exploit Soviet long-term weaknesses. The hallmark of this Administration's defense program in the second term will be the search to identify and implement competitive strategies for deterrence.

5. How Much Is Enough?

Finally, how much is enough? Having strengthened our defense capabilities during the first term, can we not now turn to other priorities?

The real question is: How safe is enough? I will not pretend that there is a simple answer to this question. Conclusions about risk, credibility, and deterrence rest on many difficult judgments. Some people would prefer to evade this issue by imagining that there exists some definitive calculus of deterrence. There does not. Others take the position that whatever the Administration proposes is too much. This view is also based on the wishful thinking that the Soviet threat is not as great as the facts demonstrate it is.

When building a house in an area vulnerable to hurricanes or earthquakes, contractors can take greater precautions, or fewer -- spending more or less on what they call the "safety premium." Consider an individual who builds his family home in the path of recurring hurricanes with no attention to that threat, and who would then keep his family in the house during a hurricane rather than evacuate to a safer area. Most Americans would judge such an individual negligent and reckless. The question for the American people in planning for our defense is how prudent -- or risky -- we want to be with our nation's security.

The issue is even more pointed. The analogy of a "safety premium" in the construction of a house is passive. In fact, our preventive actions affect potential aggressors' decisions to threaten our interests. Military strength is better than repairing the damage, since it reduces the likelihood of attack as well as the level of destruction.

Consider another simple analogy. Our national security can be compared with protecting our safety from criminals at home. By making our businesses and houses more secure against crime, and by maintaining police and courts that assure swift and certain punishment of criminals, we present disincentives to crime. In a similar manner, when U.S. defense capabilities are sufficient to persuade the Soviet Union that its aggression will fail, we dissuade Soviet challenges.

In equipping and manning U.S. forces, the Department of Defense cannot and does not spend a dime that the Congress does not appropriate. I recognize that many in the Congress, and many citizens, believe that our defense revitalization should stop, or even be reversed, Many cite the trillion dollar cost of the military's rebuilding program thus far, as if that is a conclusion against continuing, without recognizing that non-defense programs have cost far in excess of two trillion dollars during the same period. Of course, the United States can cut its defense spending -- but not without weakening its military forces. The United States can weaken its military forces -- but not without weakening its deterrent. We can, of course, choose to weaken our deterrent -- but not without increasing the risks of Soviet aggression.

Some Americans seem to be prepared to accept a higher risk of Soviet aggression. But I continue to believe that if the American people look squarely at this choice, the majority will decide against weakening our deterrent and, thereby, increasing the risks of war. I can assure you that as long as I serve as Secretary of Defense, I will do all I can to explain the risks as clearly as I can. Even though I know well that this is not the road to universal acclaim, I will continue to remind anyone who will listen of the potentially catastrophic consequences of an inadequate "safety premium" and accepting less than the safest feasible deterrent.

C. THE FIRST FIVE YEARS: WHAT HAS BEEN ACCOMPLISHED

Five years ago, the Reagan Administration embarked on a program to rebuild the United States' Armed Forces and restore the military balance of power necessary to deter war and maintain peace. With the help and support of the Congress and the American people, we have made steady progress toward our goal of acquiring sufficient military strength to deter aggression, both conventional and nuclear, against the United States, its allies, and its vital interests.

Because of the multiyear lag between financial commitment and military payoffs, much of the last five-years' investment remains in the pipeline. Nonetheless, it is useful to compare the effectiveness of today's military forces with those we inherited when this Administration came into office. In absolute terms, we now possess the most effective American military force we have ever had in peacetime. According to General John Vessey, the recently retired Chairman of the Joint Chiefs of Staff, and a veteran of 46 years of military service, our military is "...in every meaningful sense far better than at any time in my long service....with better people, armed with more and better equipment."

At the beginning of this Administration, I established four priorities for rebuilding the military strength essential for stable deterrence. Those priorities were and remain:

-- To regain an effective high-confidence deterrent to nuclear war by modernizing America's strategic nuclear forces. That required upgrading and strengthening all three legs of the strategic triad and improving our ability to command and control those strengthened forces; funding and deploying the Peacekeeper ICBM, the air-launched cruise missile, the B-1 bomber, and additional Trident ballistic missile submarines (SSBNs); completing development and deployment of the D-5 missile in our Trident submarines; and proceeding with the development of the new Advanced Technology Bomber (ATB) and Small ICBM.

-- To rebuild our capability to deter conventional war by increasing the combat-effectiveness of our general purpose forces, specifically their readiness and sustainability, and by adding to our capability to deploy forces rapidly to distant theaters of operation.

-- To recruit and retain quality people. President Reagan and I were determined to restore our military Services to their rightful place in our society, attracting and retaining first-class people with high morale in an all-volunteer force.

-- To maintain and revitalize our alliances and add new friends as a major source of U.S. and free world strength in the long-term competition with our Soviet adversary.

In assessing the accomplishments of this Administration, it is easy to get bogged down in debate about particular achievements or failures and miss the overall effect on our nation's security of our expenditures and policies over the past five years. The central issue is what has happened to our overall defense posture, specifically our ability to deter war, under this Administration's stewardship.

1. A Safer America

During the last campaign, President Reagan asked the American public: "Are Americans safer than we were four years ago?" In the last Presidential election, most Americans thought so. It is interesting to reflect that even in the course of their call for sweeping DoD reorganization, Senators Goldwater and Nunn also agree that America is indeed safer. As Senator Goldwater has stated:

> ***Beginning in 1975, we began an unprecedented peacetime buildup of our armed forces . . . . I am proud to report that our investment has paid off. In many ways, we have never had finer soldiers, sailors, airmen, or marines. They are better educated, better trained, better equipped, and better led than at any time in the past.***

Why do Americans feel safer today than they did in 1980? Because we are safer. Recall the situation we inherited in 1981. Two decades of steady Soviet increases in military spending, matched by a decade in which U.S. defense spending declined, was beginning to tilt the military balance. Could Soviet leaders perceive this growing imbalance as providing them an exploitable advantage? If so, might they be tempted to seek political or territorial gain? Indeed, was not this precisely what they were doing in transporting Cuban proxies to Angola, or invading Afghanistan?

This Administration recognized the need to move decisively to reverse the decline. President Reagan and I saw that continued Soviet growth in contrast to our decline had created a real danger. Recognizing that the delicate balance of deterrence hinges not only on actual military capabilities, but also on leaders' perceptions of advantage, we moved to do everything we could, as quickly as we could, to ensure that under no circumstances might the Soviet leaders have any illusion that their forces could be used to advantage against our vital interests.

With what results? Since President Reagan took office and we accelerated the rebuilding of American military strength, the sequence of Soviet aggression against one country after another, stretching from Angola to Afghanistan has ceased; the Soviets have returned to the negotiating tables to which they vowed never to return; and they have, for the first time, begun discussing major reductions in nuclear weapons. While there are many reasons for these changes in Soviet behavior, no one can seriously maintain that American actions did not play an important role.

2. People

The single most important indicator of the strength of any organization is its people -- their competence, commitment, and morale. It is these professionals in our military Services who constitute the core of our military strength.

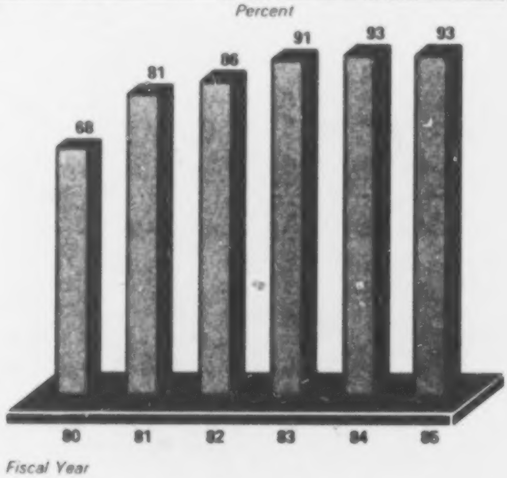
Why is the All-Volunteer Armed Force succeeding -- contrary to the expectation of many critics in 1981? How can we continue to exceed our recruitment goals and entrance standards?

No turnaround in these past five years has been more remarkable than the improvement in personnel quality and retention throughout all components of the military Services. We currently have 2.15 million people in uniform, up from 2.05 million five years ago. Last year, 91 percent of the Army's recruits were high school graduates, in contrast to 54 percent in 1980.

Chart I.C.1

Recruits with High School Diplomas

(All Services)



The retention of these skilled Servicemembers has also improved over the past five years. The first-term reenlistment rate rose from 38 percent in 1980 to 48 percent in 1985, enabling the Services to retain people with critical skills for an additional term of duty. The career retention rate jumped from 71 percent to 84 percent over the same period -- permitting us to keep the skilled, dedicated, technical people and noncommissioned leaders required for an effective military force.

These personnel are better trained, better led, better prepared, better equipped, and better disciplined than ever before. We are confident that we currently maintain a higher peacetime readiness level than at any time in the past. In spite of budget constraints, we are working hard to preserve realistic, high-quality training and exercises and the material support required to maintain these quality forces. In the long run, this will save us money, and it could save lives.

In the late 1970s, military compensation was allowed to fall far behind pay in the private sector. As the Congress debated, both enlisted personnel and officers left, taking with them valuable experience and expensive training. For example, an F-15 fighter pilot with seven years' experience and 1,300 flying hours, represents an investment of more than one million dollars. We cannot hire another fighter pilot "off the street" or from a competitor, as might be done in private industry. And 1,300 hours of flying experience are lost. The short-term savings realized by neglecting military compensation and quality of life in the 1970s became very expensive for the taxpayer and very dangerous for us all in the 1980s. This is a mistake we cannot afford to repeat.

Maintaining quality manpower is not simply a matter of dollars and cents. The commitment and devotion required to accept 24-hour-a-day duty, frequent and sudden moves to far corners of the world, family separations, and the ever-present risks inherent in serving in combat, are commonplace in the Services. This kind of devotion cannot be bought with money. If it could, we could not afford it.

Such devotion also cannot be secured, especially in peacetime, if the basic needs of our military members and their families are not met. We must attend to these needs in special ways, consistent with the special demands we place on them. Their morale and our peace and freedom depend on it. Fortunately, Americans believe in our ideals, and are devoted to protecting them. President Reagan has helped revive the nation's pride in those who wear a uniform. Continued respect for our Service men and women is a vital ingredient in our nation's future security.

3. Strategic Nuclear Forces

Our strategic nuclear posture is based upon the Triad, a combination of land-based ICBMs, sea-based SLBMs, and long-range bombers. Over the last five years, we have begun the modernization of all three legs of the Triad. That modernization was necessary because the capabilities of our Triad vis-a-vis the Soviets had declined seriously during the 1970s. Our objective has been to give U.S. strategic forces a better capability to execute our strategy, which calls for a highly effective and survivable second-strike force that could retaliate flexibly against an array of targets. This modernization effort is far from complete. But we are making major strides toward the goal of building a modern force that will meet our needs, in the face of the Soviet threat, for many years to come. Each leg of the Triad is being improved, but what matters most is the combined impact of all these improvements: they are mutually reinforcing, thereby making our posture significantly more secure.

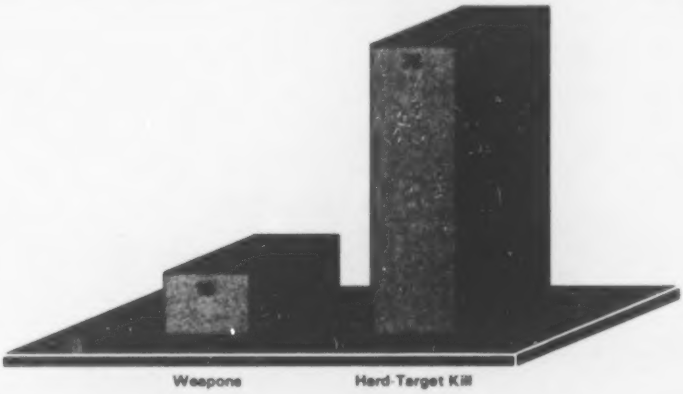
Over the past five years, five squadrons (90 aircraft) of B-52G aircraft have been modified to carry 12 air-launched cruise missiles (ALCM) each. An additional 95 B-52Hs also will be modified to carry ALCMs. The sea-based leg of the Triad has been strengthened by the deployment of seven new Trident SSBNs, each armed with 24 Trident I (C-4) SLBMs. The effect of the deployments of the B-1B bomber, Peacekeeper ICBM, and Trident II (D-5) SLBM, and of improvements in our command, control, and communications (C^3) systems will be to reinforce in the minds of the Soviet leaders the knowledge that aggression at any level against the United States and its allies can never succeed.

Chart I.C.2 shows the impact modernization has already made on our surviving strategic nuclear capability. In FY 1985, primarily as a result of the deployment of C-4 missiles on Ohio-class SSBNs, we had almost 20 percent more weapons able to retaliate after absorbing a Soviet first strike than in FY 1980. Over the same time period, and largely resulting from the deployment of ALCMs on B-52s, we achieved almost a 75 percent increase over FY 1980 in surviving "hard-target-kill" capability -- after a Soviet first strike -- a capability we must have to threaten a credible response against hardened Soviet targets. Additionally, we have reduced and eliminated many older weapons, a total of more than 8,000 since 1967.

Thus, our forces are now far more capable of absorbing a Soviet strike and retaliating in a flexible and controlled way. As funded improvements in our command, control, communications, and intelligence (C^3I) system become operational, our strategic forces will be capable of striking back against a wide range of Soviet targets, thus enabling us to respond to any form of Soviet aggression against the United States or our allies. By eliminating any possible Soviet incentive to attack, our force improvements strengthen deterrence.

Chart I.C.2

Percent Increase Since FY 1980 in Surviving Strategic Nuclear Capability (Day-to-Day)



4. Ground and Tactical Air Forces

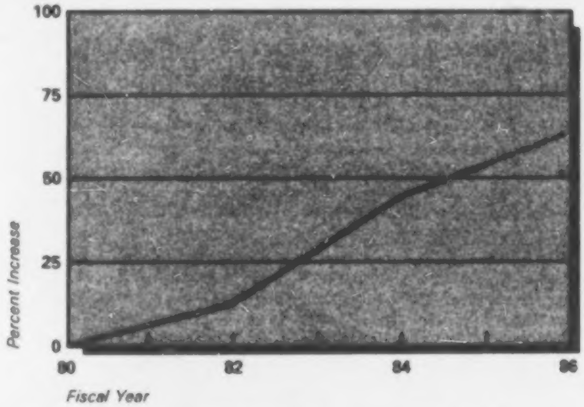
With the emergence of nuclear parity between the United States and the Soviet Union, our general purpose forces have become even more critical in maintaining a secure deterrent. Our strategy requires conventional forces that are capable of conducting a forward defense of critical theaters where the Soviets threaten our interests, without recourse to nuclear weapons. Our ground and tactical air force modernization programs are helping to provide the strong forward defense forces we need in Europe, Southwest Asia, and Korea.

For example, the Army's modernization program, which is based on the new AirLand Battle doctrine, is providing a combined-arms capability that will enable our divisions to maintain a qualitative edge over the much larger Soviet force. We estimate that replacement of a mechanized division's M60 tanks with M1s, and substitution of Bradley Fighting Vehicles for half of its complement of M113 APCs, should increase the division's armored vehicle capability by about 55 percent. Divisional attack helicopter capability is calculated to go up by the same amount with fielding of the AH-64 Apache helicopter in lieu of the Cobra. The addition of the Multiple Launch Rocket System, in conjunction with other artillery changes, is estimated to increase divisional fire support capability by about 50 percent. Improvements in C^3I and support forces further strengthen the force's ability to employ these highly effective weapons to full capacity.

In addition, new systems such as the Blackhawk helicopter and the new jeep are improving the mobility and support capabilities of our land forces. The full impact of these major modernization programs will be felt over the decade ahead. When they are fully deployed, our conventional deterrent capability will be greatly increased. There is no single index of warfighting capability. The

Chart I.C.3

Improved Warfighting Capability of an Army Mechanized Infantry Division[a]

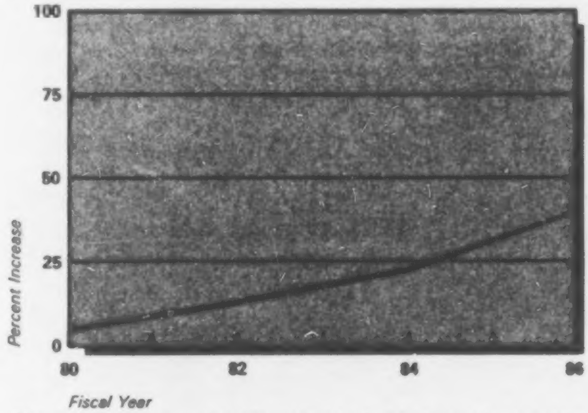


[a]Cumulative increase in warfighting capability of U.S. division compared to FY 1980 capability.

Department of Defense and the Services therefore use a combination of measures to assess net effects. One such measure that we consider

Chart I.C.4

Increase in Warfighting Capability of Army National Guard Divisions[a]



[a]Cumulative increase in warfighting capability of U.S. Army National Guard divisions compared to FY 1980 capability. Includes RC units.

reasonably sound assesses the synergistic effects of the various weapons assigned to an Army mechanized infantry division. By this measure, the warfighting capability for the lead division in the modernization effort increased by 53 percent between FY 1980 and FY 1985, and is projected to rise as much as 60 percent by the end of FY 1986 (see Chart I.C.3).

The overall warfighting capabilities of the National Guard divisions have also improved markedly over the same period, as Chart I.C.4 shows.

Together with force improvements by our allies, these modernization programs have significantly strengthened our combat capabilities in Europe and other key theaters. In Central Europe, U.S. forces are better able both to defend the V and VII Corps sectors in Southern Germany, which guard such critical attack corridors as the Fulda Gap, and to provide the mobile operational reserves, especially in NORTHAG, that NATO's posture requires to contain Warsaw Pact breakthroughs. Likewise, our ground forces not only will be able to reach the critical and distant Southwest Asian region more quickly than before (due to our mobility programs), but will also confront the Soviets with a vastly stronger, more flexible, and more durable defense posture. Our forces in South Korea, and our ability to reinforce them quickly, have improved similarly. The net improvement in our forward defense posture in these theaters is not marginal. It is fundamental.

Chart I.C.5.
Land Force Modernization

	On Hand		Procured But Not Delivered Yet in FY 85
	FY 80	FY 85	
Close Combat			
M1 Tanks	34	3,021	1,116
Bradley Fighting Vehicles	0	1,936	1,019
Hellfire Missiles	0	111	14,533
Helicopters			
AH-64 Apache	0	45	264
AH-1S Cobra	538	990	11
UH-60 Blackhawk	0	584	15
Air Defense Missiles			
Patriot	0	612	978
Stinger	0	6,554	5,096
Artillery			
Multiple Launch Rocket System	0	204	100
Copperhead	0	8,541	6,349

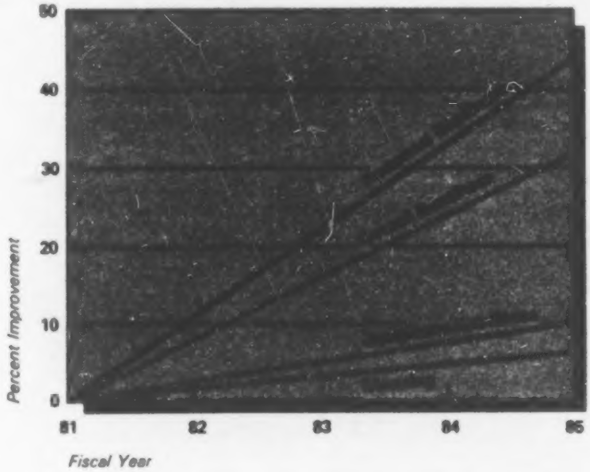
Ongoing modernization programs for our tactical air forces supplement our ground force programs. Here again, an array of measures demonstrate steady improvement in the capability of our tactical aircraft. One of the most reliable measures relates to the number of sorties the tactical air forces can fly, and the availability and effectiveness of munitions. Since 1980, we have increased our ability to generate fighter sorties by about 80 percent, and to conduct them with better, more lethal munitions. As a result, the ability of our tactical air forces to destroy enemy air forces both in the air and on the ground has improved substantially. In addition, immediate readiness for combat has gone up in the past three years. The mission-capable rates of Air Force fighter/attack aircraft rose from 62 percent to 67 percent. This is especially notable in view of the increase from 15 to 19 hours in monthly flying time per aircrew and the larger inventory of aircraft to be operated and maintained.

Our tactical air forces are becoming significantly more capable of destroying Soviet armored ground forces. Since World War II, our air forces have faced the demanding problem of aiding our outnumbered ground forces in deterring a Soviet attack on Western Europe and elsewhere. While we always have had substantial tactical air forces to perform this mission, we have faced major constraints in improving the accuracy and lethality of their munitions to the point that they could efficiently destroy Soviet ground targets, especially armored vehicles. With progress in aircraft avionics and munitions, this problem is now being overcome. Over the next few years, our aircraft will improve their capability to perform this difficult mission.

5. Naval Forces

The warfighting capability of our naval forces is improving markedly with the increase in the quantity and quality of our ships. In October 1985, the deployable battle force stood at 541 ships, well along the way to our goal of 600. In addition, readiness has risen sharply, as noted in Chart I.C.6.

Chart I.C.6
The 600-Ship Navy: Fleet Manning and Readiness Up

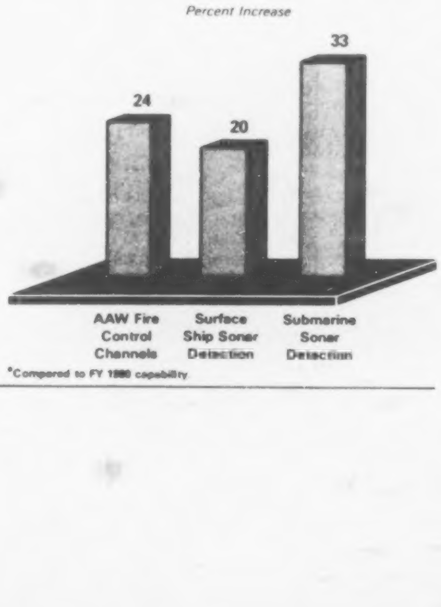


Improved target-acquisition and tracking systems, like the Aegis, have boosted the capability of our forces to conduct antiair warfare (AAW) operations. Similar improvements in antisubmarine warfare (ASW) capabilities have followed from the development of advanced detection and tracking systems and the addition of the high-technology Light Airborne Multipurpose System (LAMPS) MK III helicopter. And finally, new attack submarines, far quieter and outfitted with advanced sonar systems, are rapidly replacing older, less capable units. The Tomahawk cruise missile gives these submarines not only a surface-to-surface attack weapon, but also the ability to strike land targets at extended ranges. Several of the principal changes in our AAW and ASW force capability are summarized in Chart I.C.7.

The status of naval aviation is equally positive, marked by steady increases in the number of F-14, F/A-18, P-3C Update III, SH-60B, and A-6E aircraft entering the fleet. Design emphasis on maintainability and reliability has increased aircraft utilization and reduced down time for all of our new aircraft. Mission capable rates for Navy fighter/attack aircraft -- the teeth of our carrier battle groups -- jumped from 53 percent in FY 1980 to 66 percent in FY 1985, with further increases expected in future years.

The net effect of these improvements has been to strengthen our maritime defenses around the globe. In the European theater, for example, U.S. and allied forces are becoming more capable of defending the critical North Atlantic sea lines of communications (SLOCs), reinforcing our allies along the flanks, and containing Soviet naval forces in northern waters. Concurrently, our naval forces are acquiring a better capability to secure our Pacific SLOCs and to contain Soviet naval forces in their home ports. Finally, a stronger naval posture enables us to project maritime power into the Indian Ocean and Persian Gulf, even while meeting our wartime requirements in the Atlantic and the Pacific. This worldwide naval capability helps our forces secure control of the oceans, thereby allowing the United States to project military power to any area where the Soviets might contest our vital interests.

Chart I.C.7
Increase in Selected Naval Capabilities*
(FY 1985)



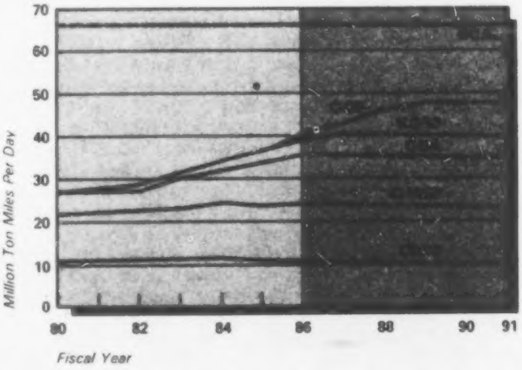
*Compared to FY 1980 capability

6. Strategic Mobility Forces

These forces include our very large intertheater transport aircraft (such as the C-5 and C-141), the air-to-air tankers that refuel them, and our sealift forces. The C-5A aircraft are being equipped with replacement wings, and the C-141Bs have been stretched and given an in-flight refueling capability.

Very significant increases in lift capacity have been achieved since 1980, as indicated in Charts I.C.8 and I.C.9. Airlift capability has increased by about 35 percent, and by the end of the program, the increase will be almost 90 percent. Included are purchases of 50 new C-5Bs and 44 additional KC-10s (for a total of 60). (The latter aircraft increase aerial-refueling support for tactical aircraft as well as for the airlift fleet.)

Chart I.C.8
***Strategic Airlift Capability*[a]**

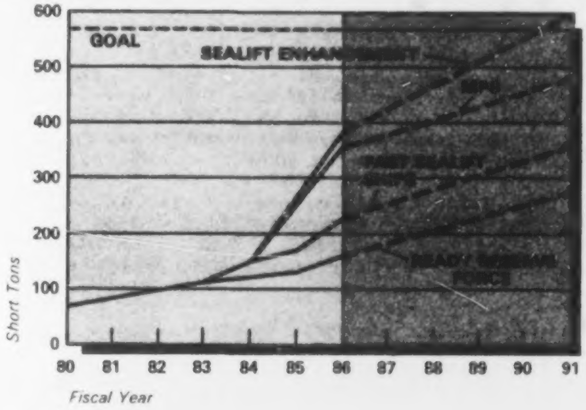


[a]The C-17 does not achieve initial operational capability until FY 1992 and is not included.

Improvements in sealift have been even more dramatic. By the end of 1986, all eight Fast Sealift Ships (FSS) will have been modified to a roll-on/roll-off configuration, providing the ability to deploy rapidly an entire heavy division and its associated support. In addition, all three Maritime Prepositioning Ship (MPS) squadrons will be on station, providing for the rapid deployment of an entire Marine Amphibious Force (MAF). Total growth in government-controlled sealift since 1980 has been nearly 300 percent and by the end of the program will be nearly 700 percent.

These improvements in strategic mobility significantly increase our ability to respond to threats to our interests, especially in distant areas, that demand a fast U.S. response. In Europe, for example, our mobility programs are building toward a capability to deploy six combat divisions and 60 tactical fighter squadrons by ten days after mobilization, thereby enhancing NATO's posture. The effect in Southwest Asia is even more dramatic. Prior to these programs, we could have deployed only one division to the Persian Gulf in the first month. Once these programs are complete, we will be able to deploy seven divisions in Southwest Asia.

Chart I.C.9
Dedicated Strategic Sealift Capacity



7. Special Operations Forces

When this Administration took office in 1981, one of the most urgent tasks we confronted was the revitalization of our Special Operations Forces (SOF). We have made substantial progress toward achieving our goals in this area, and we continue to assign a high priority to completion of the effort.

In 1981, funding for SOF totaled about $440 million. The state of readiness was not consistent with heavy peacetime utilization, the key role of SOF in contingency response, or the early employment of SOF in wartime. Moreover, following the deep cuts of the 1970s, the force structure was substantially short of meeting requirements at all levels of conflict.

Chart I.C.10
Special Operations Expansion

	FY 1981	FY 1987	FY 1991
Total Funding (millions)	$441	$1,693	$1,822
Special Forces Groups[a]	7	8	9
Ranger Battalions	2	3	3
Psychological Operations Battalions	3	4	4
SEAL Teams	2	5[b]	6[b]
SEAL Delivery Vehicle (SDV) Teams	0	2[b]	2[b]
Seafox (Special Warfare Craft, Light)	8	36	36
Sea Viking (Special Warfare Craft, Medium)	0	0	18
MC-130 Combat Talon	14	14	29
AC-130 Spectre Gunship[c]	20	20	32
HH-53H Pave Low	9	9	19
MH-60X Helicopter	0	0	12
MH-47E Helicopter	0	0	15

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[a] Includes four Reserve Component groups

[b] Includes two Underwater Demolition Teams redesignated in 1983

[c] Includes ten AC-130A Air Force Reserve gunships. FY 1991 number reflects addition of AC-130H aircraft replacing the AC-130As in the Air Force Reserve

Chart I.C.10 displays the expansion of SOF to date and the initiatives contained in the FY 1987-91 program.

8. Command and Control

Effective command and control of U.S. forces depends on reliable and survivable equipment. At the strategic level, computer capacity and throughput rates have improved significantly, along with the coverage provided by defense satellites. Strategic command, control, and communications also have been made far more secure and survivable since 1981, and we are well on the way to developing the robust C^3 capability we need for effective nuclear deterrence.

At the tactical level, the Army is adding new field communications systems and improving the efficiency of its signal battalions. One such example is the Mobile Subscriber Equipment (MSE) program, which will provide military commanders with a survivable, secure, mobile capability to communicate throughout the battlefield. For the first time in the history of the Army, this will allow units to have fully interoperable, encrypted, jam-resistant, mobile, tactical communications equipment. The MSE program uses an innovative, competitive non-developmental acquisition strategy that will save in excess of $500 million in RDT&E funds and over $1.5 billion in acquisition costs. Acquisition of off-the-shelf equipment will allow the Army to begin fielding this new capability in less than three years and complete conversion of the Army five years later. The Air Force has added both command and control aircraft and centers; the Navy has more than tripled the number of ship satellite communications systems and increased shore satellite terminals five-fold since 1981.

D. THREATS, MILITARY BALANCES, AND NET ASSESSMENT

We have made considerable progress over the last five years in restoring our military strength. In conjunction with efforts of our friends and allies, renewed American strength has contributed to world peace. Yet the threats to our vital interests also have grown and pose a continuing challenge both to our capabilities and our resolve.

The Soviet Union remains the major military threat to the United States and its interests. They persist in an unrelenting arms build-up that has continued for more than 20 years. The magnitude of that effort is so great that it consumes 15 to 17 percent of their gross national product (GNP). Even more worrisome is the magnitude of their effort relative to ours. Over the last 20 years, the estimated dollar cost of the Soviet military program has been more than 30 percent greater than our own.

Comparisons of military power in various functional and regional areas in which we compete are termed military balances. Net assessment seeks to weigh not only the threat posed by military forces but also U.S. capabilities to meet that threat, and thus the net effect. Such assessments assist in identifying adverse trends before they become too severe, and enable us to focus our efforts to redress them.

1. The Nature of the Soviet Threat

The Soviet Union has long relied on military power as its primary instrument for expanding control and influence throughout the world. Consequently, its military forces are structured and designed as offensive forces, ever growing in size and sophistication, meant to intimidate and, if necessary, to impose the will of the Soviet Union on other nations. The Soviet military deploys more than 30 divisions throughout Eastern Europe. They maintain a large naval and air base at Cam Ranh Bay, Vietnam; a brigade in Cuba; and large numbers of military advisors throughout the Third World. Today, 115,000 Soviet troops are at war in Afghanistan. And the continuous flow of increasingly sophisticated weapons to Marxist regimes like the Sandinistas in Nicaragua and revolutionary groups testifies to their commitment to fostering instability in the Third World.

While Soviet leaders regard military power as their primary strength, they view the struggle with the West as multidimensional, combining political, economic, scientific, ideological, and military factors into what they characterize as the "correlation of forces." The Soviets constantly work to modify and exploit this correlation to their benefit through subversion, propaganda, covert activities, the use of proxies, and the threat of intervention. Brezhnev declared in 1973: "A decisive shift in the correlation of forces will be such that by 1985 we will be able to exert our will whenever we need to." Although the efforts of the Western world prevented the Soviets from reaching their 1985 goal, we must continue our efforts to ensure that they never reach it.

Soviet ambitions are global. Lenin wrote: "We aim at the firm union and full fusion of the workers and peasants of all nations of the world into a single, worldwide Soviet Republic." This goal remains unchanged. Attempting to achieve it requires extraordinary efforts to build and maintain armed forces. The totalitarian nature of the Soviet Union, and the closed and secretive nature of its society, permit the leadership to direct huge resources to military expenditures at the expense of the quality of life of the Russian people. And make no mistake, these military efforts have indeed come at such an expense. Soviet real GNP growth has been slowing since 1970. Civilian investment and consumer goods have been constrained in order to fund the huge military buildup. The rate of growth of per capita consumption in the Soviet Union has declined consistently since the 1960s -- over 4 percent in the late 1960s, less than 3 percent in the first half of the 1970s, less than 2 percent in the last half of the 1970s, and barely 1 percent in the first half of the 1980s. Among industrial nations, only in the USSR has life expectancy declined during the past two decades, death rates (including infant mortality) increased, and control of major communicable diseases deteriorated dangerously. Clearly the Soviet leadership has been willing to sacrifice the very people it ostensibly represents in order to fund, beyond any reasonable level, its military programs.

The "alliances" the Soviet Union maintains are built on coercion and Soviet military power. The Warsaw Pact is not a free and voluntary association of sovereign nations like NATO. Rather, it is an empire based on intimidation and fear. When the people or governments of those nations attempt to make choices for themselves, the Soviet Union has not hesitated to use either its military power to crush them, as it did in Hungary in 1956 and Czechoslovakia in 1968, or covert action backed by a threat of intervention to undermine them, as it did with Solidarity in Poland. According to the Brezhnev Doctrine, proclaimed in 1968 and reaffirmed regularly thereafter: "The sovereignty of individual Socialist countries cannot be counterposed to the interests of world socialism and the world revolutionary movement."

A prudent American defense policy must respond to Soviet programs and to the character of the Soviet system. In framing our defense policy, we must consider the nature of the threat to our vital interests, the trends in the various military balances, and our net assessment of how well we are doing relative to our adversary in each arena.

We must also attend to longer-run strengths and weaknesses. Their totalitarian system gives the Soviet leaders command and control of the Soviet Union's population and resources with minimal constraints of a constitution, competing authorities, or public opinion. This allows them to direct political, military, economic, and ideological instruments at will and in secret. They exercise considerable control over their allies. Their geopolitical situation allows them to probe and exploit opportunities for expansion both in Europe and Asia. And by an unparalleled effort, they have in one dimension become a superpower with a military might of extraordinary proportions.

But in the longer run, Soviet weaknesses become even more impressive. The heart of their long-term weakness is the source of their short-term strength: their political system's command and control of every area of Soviet life. Such control risks sclerosis. An economy coordinated by politicized command rather than market forces has seen its rate of growth steadily decline. Such control inhibits adaptive experimentation especially in an era of rapid technological change led by independent centers of initiative. The revolution spearheaded by micro-electronics and computers depends upon widespread access to information and communication, and thus poses for the Soviet systems a threat of terminal decline. Geography bequeaths them no warm water ports, thereby limiting ocean access. Short-term advantages of empire are falling victim to the inevitable strains inherent in an attempt to dominate nations with the histories and traditions of the Eastern Europeans. Geopolitically, it has been quipped that the Soviet Union is the only nation to be entirely surrounded by hostile communist countries. They face the threat of adversaries on two fronts, NATO to the West and the People's Republic of China (PRC) and Japan to the East. Trends in demography, health statistics (especially alcoholism), and the growth of non-Russian nationalities challenge the Soviet leaderships' conception of their regime. The political and cultural values enshrined in Soviet communism are falling behind the march of history.

In sum, the Soviet Union is a formidable adversary today, and will remain so for the foreseeable future. But the longer-term prospects for the forces of freedom and democracy are bright -- if we have the fortitude to deny them exploitable military options.

2. Assessing Military Balances

Net assessments of military balances help us to determine whether we and our allies can achieve our security objectives despite opposition from adversaries. By comparing not just numbers of weapons or troops, but the capabilities of their forces against ours over time, net assessment allows us to judge the severity of threats to our interests and to identify areas of emerging concern.

Assessing military balances is not an exact science. Judgments must be made in defining the framework for analysis and identifying the countries whose forces are to be compared, the types of forces, their locations, the time frame, and the measures by which comparisons are to be made. For some purposes, such as assessing the strategic nuclear balance between the United States and the Soviet Union, only the forces of those two nations need be considered. Other assessments, such as the conventional military balance in Europe, require consideration of the forces of NATO and the Warsaw Pact nations.

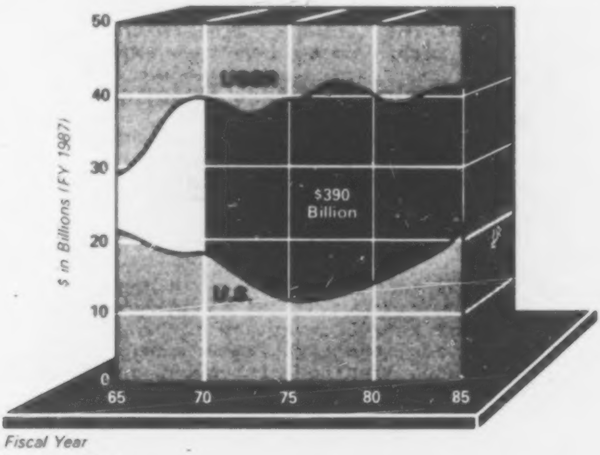
The choice of what is to be compared is more difficult. A particular assessment may involve consideration of one, several, or all kinds of military forces (e.g., strategic nuclear, theater nuclear, conventional, or maritime). Straightforward quantitative comparisons require decisions on whether they should be regional or global, and on whether to include total inventories or only those items in operational units. Dual-use systems, such as artillery capable of firing both nuclear and conventional munitions, also present counting problems. One could compare the weapons systems of each side (e.g., tanks versus tanks, or attack aircraft versus attack aircraft), or with the counter-systems of the other side (e.g., tanks versus antitank weapons, or attack aircraft versus air defenses). Recognizing that numbers of people and equipment do not accurately reflect military capabilities, most assessments take into account some qualitative aspects of the forces. But we have only imprecise knowledge of the performance characteristics of many Soviet weapons, and the data available for many of our own systems are rarely obtained under conditions of actual combat. Moreover, some of the most important variables such as military leadership, troop training, organizational structures, and alliance cohesion are less tangible.

In addition to quantitative and qualitative aspects of the forces themselves, economic measures serve as useful standards for comparison. Because the forces of the two sides differ in size and nature, comparisons are difficult, but some indication of their perceived utilities is provided by their costs. A highly aggregated measure of particular interest is overall military investment (that is, expenditures for research, development, test, and evaluation; procurement; and construction). In this category, the Soviets have led the United

States for about two decades, by very large margins in the mid-1970s and by somewhat smaller margins in the early 1980s (see Chart I.A.1).

Chart I.D.1

A Comparison of U.S. Strategic Force Expenditures with the Estimated Dollar Cost of Soviet Forces [a]



[a] Excludes RDT&E

After the information for a particular net assessment has been gathered, it must be analyzed and presented in ways that permit meaningful comparison. Analysis can range from categorization and aggregation, to calculations of outcomes of hypothetical armed conflicts in a range of scenarios and "war games" involving skilled and experienced participants. Each method involves judgments and interpretations; each has inherent strengths and weaknesses; and each can provide meaningful approximations and insights. While no single net assessment can accurately and confidently determine whether our security objectives can be met, the net assessment process makes a valuable analytical contribution in evaluating how we are doing and identifying ways in which we can do better.

3. The Strategic Balance

As a result of President Reagan's strategic modernization program, the strategic balance is adequate to deter Soviet nuclear aggression against the United States and its allies today. If the Congress permits us to complete this modernization program, we believe the United States will have a secure nuclear deterrent for the decade ahead. But the Soviet Union is not standing still.

In the past year, the Soviet modernization program has continued with the development and deployment of new generations of more capable land, sea, and air forces. Having just completed an extensive deployment of a new generation of intercontinental ballistic missiles (ICBMs), they have begun deployment of yet another new generation of

ICBMs. The new single-warhead, road-mobile SS-25 is now being deployed (in violation of their stated policy to adhere to SALT II), and the multiple-warhead SS-X-24 will be deployed soon, in both a silo-based version and a rail-based version. At least three new Soviet ICBMs are being prepared for flight-testing within the next five years: a new silo-based heavy ICBM follow-on to the SS-18, a new version of the SS-X-24, and a new version of the SS-25, potentially with a MIRVed payload.

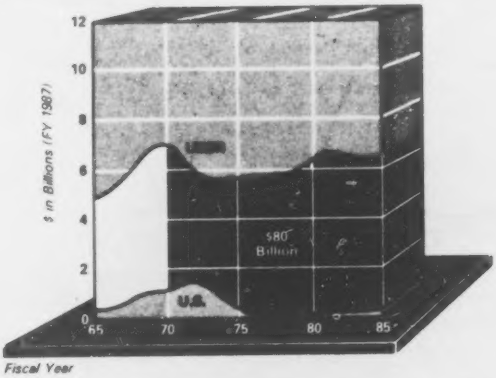
The capability of the large fleet of 64 modern Soviet ballistic missile submarines (SSBNs) is being enhanced by the construction of more advanced and quieter vessels. The longer range SS-N-20 sea-launched ballistic missile (SLBM), deployed aboard Typhoon SSBNs, and the SS-NX-23, destined for the Delta III and IV class submarines, allow this more sophisticated Soviet SSBN force, with more accurate missiles, to conduct patrols in waters protected by Soviet air and sea forces. The Soviets have also added the long-range SS-NX-21 sea-launched cruise missile to their already deployed arsenal of shorter range nuclear SLCMs. Another new long-range cruise missile, the SS-NX-24, is also being tested. We expect a replacement for the SS-N-20 SLBM to be flight-tested soon, and one for the SS-NX-23 SLBM later in this decade.

Furthermore, the Soviets are continuing to diversify their offensive strategic capabilities. They have begun deploying the new Bear-H bomber, armed with modern, long-range, air-launched cruise missiles, and are developing another intercontinental bomber, the Blackjack. These programs will complicate the tasks of U.S. continental strategic air defense and significantly increase the Soviets' ability to augment their worldwide ballistic missile attack potential with highly flexible manned bomber systems.

In conjunction with this offensive buildup, the Soviets continue to increase their passive and active defenses in a clear and determined attempt to blunt the effects of U.S. retaliation. Their expenditures for strategic defenses are far greater than ours (see Chart I.D.2). The passive measures include both the hardening of ICBM

Chart I.D.2

A Comparison of U.S. Strategic Defense Procurement Expenditures with the Estimated Dollar Cost of Soviet Strategic Defense



silos and launch facilities to an unprecedented degree (far above the strength of our Minuteman silos), the proliferation of hardened leadership and command, control, and communications (C^3) bunkers, and an extensive civil defense effort.

Soviet advantages in active strategic defense are substantial and increasing. These forces include air defense, missile defense, and since the 1960s, antisatellite defense. The Soviet Union has an ever-expanding strategic defense research and development program. It has the world's only operational antisatellite (ASAT) weapon capable of destroying satellites in low-earth orbit. It has developed and deployed the world's only operational antiballistic missile (ABM) system around Moscow that is being expanded to limits allowed by the 1972 ABM treaty. Additional advances include construction of an interlocking network of new large phased-array radars. So committed is the Soviet Union to ABM defense that in order to complete their phased-array radar network, they constructed a major radar at Krasnoyarsk, Siberia in clear violation of the ABM treaty. A new system of missiles and radars could be fully operational by 1987.

The Soviet defense research program addresses many of the technologies being examined in the U.S. Strategic Defense Initiative (SDI), but represents a far greater investment in terms of plant space, capital, and manpower. Considerable effort has been dedicated to laser weapons, and the Soviet Union has gone beyond research in some cases. They already have ground-based lasers that could interfere with U.S. satellites. Prototype space-based antisatellite laser weapons and ground-based lasers for defense against ballistic missiles are possible by the end of the 1980s. Testing for a large-scale system could begin in the early 1990s. Finally, the Soviets continue strategic defense research in particle beam, radio frequency, and kinetic energy weapons, and could field selected prototypes of these weapons by the mid- to late 1990s.

The net result of these Soviet efforts is to create an overall military posture designed to fight and win a nuclear war. Indeed, the magnitude of Soviet expenditures on offensive and defensive forces, combined with evidence from their military exercises and writings, underlines our strong conviction that the Soviets continue to believe that a nuclear war could be fought and won. Our strategic modernization program is designed to convince the Soviets of the impossibility of such an outcome.

Over the past five years, we have begun to reverse the negative trend evident in the 1980 strategic balance. Even though strategic modernization is a long-term enterprise, we are already benefitting from this Administration's efforts. Specifically, we are completing one Trident submarine annually, deploying air-launched cruise missiles (ALCM) on selected B-52s, introducing the new B-1B bomber into operational units, and outfitting surface and subsurface ships with nuclear armed sea-launched cruise missiles. The on-going modernization of our sea-based and bomber forces provides us with more survivable delivery vehicles with greater effectiveness against better defended Soviet targets.

A less heralded but equally important strand of our strategic modernization has concentrated on our command, control, communications, and intelligence (C^3I) systems. The command and control systems we inherited included many serious vulnerabilities. Most of these shortcomings had been recognized by prior administrations, but none had paid the price to overcome them. The Reagan Administration has devoted more than 16 billion dollars to this effort to date

-- with notable results. If the Soviet Union had been tempted by any sliver of hope that a nuclear attack could "decapitate" our political leadership and destroy our capacity to command and control a response, we believe that temptation has now been discouraged. Thus, our command, control, and communications improvements make it less attractive for the Soviets to consider a preemptive attack directed against our command system.

While U.S. modernization programs have maintained our ability to deter Soviet aggression, the magnitude and rapidity of Soviet strategic force enhancements underscore the need to sustain our efforts if we are to preserve the strategic balance and thus ensure the viability of our deterrence. The Soviet threat to the United States and its allies is projected to grow into the 1990s. The Soviet ballistic missile systems will be even more effective against hardened targets, and the new SSBNs and mobile ICBMs will be more survivable against U.S. retaliation.

Our strategic modernization program is designed to meet the challenges of this evolving threat and maintain strategic stability. The full weight of the President's strategic modernization program will be felt in the late 1980s and early 1990s as the Peacekeeper and Small ICBM, Trident II SLBM, advanced technology bomber, and advanced cruise missiles begin to enter the force. By the mid-1990s, Congress permitting, our land, sea, and airborne strategic deterrent forces will be almost totally modernized. Our command, control, communications, and intelligence systems will be able to manage our forces more effectively during demanding contingencies. Thus, our strategic forces will be more survivable and more effective against the full range of Soviet targets.

Our retaliatory force modernization program is not designed to achieve strategic superiority. The Strategic Defense Initiative is designed to enhance stability and deterrence by providing a shield against Soviet ballistic missiles and thus further reducing any Soviet incentive to initiate an attack against the United States or its allies. That is why we pursue strategic defense so vigorously and why we will continue to do so. Until the strategic defense system is deployed, our strategic offensive programs are intended to, and will, strengthen deterrence by preventing the Soviets from substantially tilting the strategic balance in their favor. In this way, we continue to deny them the opportunity to use, or threaten to use, their military forces as an instrument of aggression or coercion.

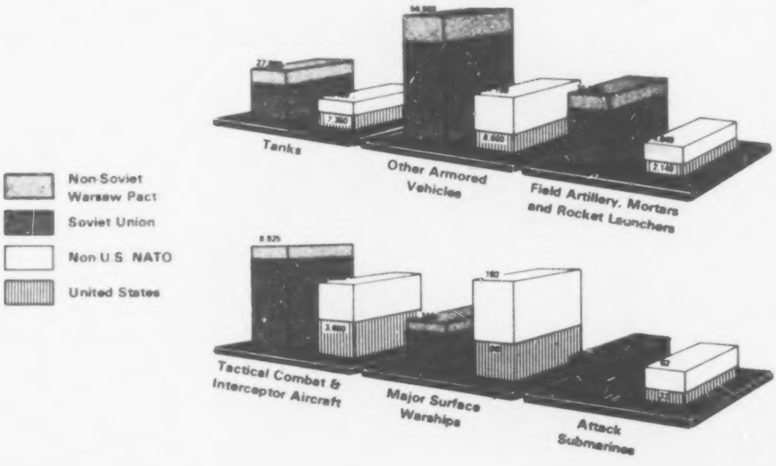
4. The NATO-Warsaw Pact Balance

The array of deployed Soviet and Warsaw Pact ground forces, supported by massive Soviet nuclear missile forces, heightens both the likelihood of war and the consequences that would follow from a conflict in Europe. These forces demand that we and our allies continue to devote our attention to maintaining a credible deterrent against Warsaw Pact aggression across the entire spectrum of potential conflict. It is our judgment that NATO currently maintains a credible capability to deter any Warsaw Pact attack, since it is not likely that Soviet assessments of the current balance of forces would give Soviet leaders high confidence of attaining their wartime objectives at acceptable costs.

Nevertheless, in Europe the Soviets maintain an overall quantitative advantage in conventional forces. Since the mid-1970s, they have widened their advantage by producing major weapons at rates exceeding the combined rates of the United States and its NATO allies, particularly in the area of ground forces (see Chart I.D.3). The general quality of Soviet weaponry and equipment has also improved markedly -- aided by the purchase or theft of Western technology. By any measure, the Soviets and their Warsaw Pact allies have built a military force far exceeding that required for the defense of their territory

Chart I.D.3

Production of Selected Weapons for NATO and Warsaw Pact Forces (1975-1985)



The Warsaw Pact continues to hold a quantitative advantage in forces on-line in Europe, with a 2-to-1 lead in major combat items, such as tanks, attack helicopters, and combat aircraft. In ground combat power alone -- a measure that includes the number and quality of armor, antiarmor, and fire support weapons -- the Warsaw Pact has widened its advantage across the Central European theater from about 1.9-to-1 in 1970 to more than 2.2-to-1 in 1985.

The maneuver elements of these forces are being expanded and are supported by an impressive array of missile forces including Scaleboards, Scuds, and Frogs. The Soviets continue to replace their older missiles with newer, more capable SS-21s and SS-23s. These new missiles are more mobile and more accurate than previous versions, and can deliver conventional and chemical munitions as well as nuclear warheads. The Soviets also have maintained the momentum in development and deployment of their shorter-range and intermediate-range nuclear forces (INF). As a result, they have a greater than 7-to-1 advantage in warheads on shorter-range missiles and at least a 6-to-1 lead in warheads on longer-range INF forces. They continue to test, produce, and stockpile chemical weapons and have a substantial advantage over NATO in chemical warfare capability.

Qualitative improvements in the Warsaw Pact forces compound their quantitative advantages. Their T80 tank is one of the best in the world, and they continue to improve their attack helicopters. New self-propelled artillery increases the maneuverability and rate of advance of their offensive operations. An increasingly diverse and sophisticated array of air defense systems protect their air bases and ground forces from NATO's air forces. These protection systems include sophisticated electronic countermeasures and short-range missiles that pose a growing threat to the survivability of NATO's operating systems, bases, and air defenses.

While NATO's traditional qualitative edge in weaponry and equipment and its better theater air forces have eroded in the face of Soviet improvements in artillery, tanks, fighting vehicles, and aircraft, NATO continues to enjoy some distinct advantages. The military application of emerging technologies, competence of NATO aircrews and support personnel, and superiority of NATO's latest frontline aircraft are examples of those advantages. But the Soviets have continued to modernize their air forces, while expanding the Pact's tactical aircraft inventory. Two new Soviet all-weather fighter/interceptor aircraft with look-down/shoot-down weapons systems, the Su-27 Flanker and MiG-29 Fulcrum, are expected to be operational in significant numbers in Eastern Europe by the late 1980s. To take full advantage of the increased range, weapons loads, and better maneuverability of these aircraft, the Soviets have begun to experiment with new tactics that place greater emphasis on pilot initiative and independence.

The quantitative advantages and qualitative improvements that the Soviets continue to make are even more troublesome in light of the Pact's obvious offensive warfighting orientation. Their offensive doctrine and the creation of operational maneuver groups of up to corps-size imply an intention to move rapidly across Western European soil. Their growing stockpiles of ammunition and fuel are clear manifestations of their desire to sustain such a conflict long enough to achieve their military objectives. And by streamlining the command structure for their strategic air, tactical air, and air defense forces, the Soviets have significantly improved their capability to launch simultaneous large-scale offensives in widely separated theaters.

NATO has taken a number of steps to bolster deterrence by countering Pact developments. The modernization of ground and air forces, and the deployment of Pershing II missiles and ground-launched cruise missiles are necessary steps to meet the evolving threat. Although NATO's deterrent posture remains credible for the present, the overall trends in combat potential are adverse and demand continued major commitments on the part of the United States and its allies. Without such investments, the risks of conflict will increase rapidly.

5. The Southwest Asian Balance

Southwest Asia's vast energy resources and its geostrategic position make it a target of Soviet ambition, and thus potentially a primary theater of military operations. The Soviets maintain major ground and tactical air forces in their military districts contiguous to Southwest Asia. For the last six years, they have attempted to subjugate Afghanistan. Since the early 1970s, they have been developing bases and maintaining a naval presence in the Indian Ocean.

As in Europe, our objective in this region is to deter Soviet aggression by making the potential costs incommensurate with expected gains. On entering office in 1981, we found U.S. force projection capability for Southwest Asia to be inadequate -- about two ground divisions and several hundred aircraft -- with serious deficiencies in strategic mobility and other types of support. We moved to improve the regional balance and have organized a new unified command, CENTCOM; built its potential force allocation to more than five divisions and more than 600 tactical aircraft; created a rapid deployment capability for about four divisions (largely through U.S.-based fast sealift and maritime prepositioning in the Indian Ocean); and added significantly to our support capability, particularly with respect to operations in desert or mountainous terrain.

The primary Soviet threat to Southwest Asia during a global conflict would be some 25 ground divisions and about 900 tactical aircraft now based in the Caucasus and Turkestan areas of the southern USSR. Selected Soviet long-range bomber and naval forces could also be employed to disrupt our projection efforts. While their proximity to the region provides an advantage in the balance, in any attempt to secure Southwest Asia's oil fields, the Soviets would still have to maintain lengthy lines of communications that would be subject to interdiction by our air and unconventional warfare forces. It is likely that a substantial portion of their ground forces would be needed for local security, and difficult terrain would limit their ability to bring additional forces to bear. Consequently, we believe that we could conduct a successful defense of Southwest Asia with substantially fewer ground forces than the Soviets, provided that our forces are heavily supported by tactical air.

If we are to furnish effective help to the many countries in the Middle East that could be threatened by Soviet attacks, we need forces in or near the area. Yet, political problems and limitations concerning facilities and access rights in peacetime continue to restrict our Southwest Asia force improvements. We are gradually overcoming these difficulties. The emphasis we have placed on CENTCOM and its associated forces will help to convince our friends in the region to join more fully with us in collective security efforts. Their cooperation is essential to keeping the peace in this volatile and valuable region. In any case, the Soviets will have to take account of our growing capabilities to combat any aggression they might attempt against the free world's vital interests in Southwest Asia.

6. The East Asian Balance

The Soviets have continued to expand and modernize their forces in East Asia. They maintain more than 50 Soviet divisions in the Far East, supported by more than 40 regiments of tactical aircraft. Fencer and Backfire aircraft are deployed in areas from which they can support Far East operations. The Soviet Pacific Ocean fleet is the largest in the Soviet navy. It contains two of the Soviet Union's three vertical/short takeoff and landing (V/STOL) aircraft carriers, about 80 principal surface combatants, and more than 110 submarines. These conventional forces are supported by a growing number of nonstrategic nuclear forces. Prominent among them is the expanded SS-20 force.

The Sino-Soviet military balance continues to favor the Soviet Union. China's long-term modernization program emphasizes economic growth at the expense of immediate improvements in conventional defenses, and its forces will not be able to match Soviet firepower or mobility during this century. Rather, China will continue to make incremental progress in improving its military equipment while relying on its large population base and geographical size as elements of conventional deterrence.

The Soviets maintain a substantial strategic nuclear superiority over the Chinese. Although China's strategic missile force remains small in numbers, the use of camouflage, concealment, and mobility is likely to preclude a disarming Soviet first strike. Furthermore, the Chinese force may be augmented by a few submarine-launched missile systems within the next decade. China's strategic strength will diminish if the Soviets deploy a nationwide missile defense system.

The second significant regional balance in East Asia is that between North and South Korea. The Korean peninsula remains an area of key interest. The military preparedness of the Republic of Korea (ROK), and North Korea's perception of U.S. resolve to protect the ROK, have been instrumental in keeping the peace for the past 33 years.

The North Koreans persist in their effort to shift the military balance. North Korea's force modernization programs, which have placed a tremendous burden on its weak economy, include the reorganization of its army and the forward deployment of nearly two-thirds of its active army forces. In this forward deployment, supported by the second largest special operations force in the world, North Korean forces have the capability to attack in ways that offer minimal warning. Again, like the Soviets, the weakness of their economy does not stop them from expanding their military effort. Their political system permits a small group of rulers to pursue military advantage at the expense of the quality of life for their citizens.

In an effort to counter this continued buildup, the ROK, with U.S. assistance, has also modernized its armed forces, but without overburdening its economy. Given the strong performance of the ROK economy, the long-term prospect for the Korean balance is favorable. But we must not become complacent, or else the situation could change for the worse.

A third significant regional balance is that in Southeast Asia. Vietnam fields the world's third largest army. Directly financed by the Soviets in return for base rights, the Vietnamese army now occupies Cambodia, threatens Thailand, and even challenges China. Maintaining a regional balance that will contain the threat will continue to demand attention.

Despite any aspects of the regional balances that may favor them, there are important theater-wide considerations that must concern the Soviets. Japan plays a significant role in bolstering Western defenses in the region by virtue of its key location, its improved antisubmarine and mine warfare capabilities, its modernized Self-Defense Forces, and its assumption of new missions (e.g., protecting sea lines of communications at distances up to 1,000 nautical miles). The Soviet decision to deploy their SSBNs in bastions close to the Soviet Union magnifies the strategic importance of islands that dominate the entrances to the Sea of Japan and Sea of Okhotsk, makes obvious the Soviet threat to Japan, and emphasizes the key importance of the defense of Japan to the security of Northeast Asia and the Pacific sea-lanes. Japan is improving its capability to provide for its own self defense and to provide essential infrastructure support to U.S. forward-deployed forces. The restrictions imposed by the limitations on Japan's defense budget have affected some critical modernization measures, and sustainability remains a major shortfall, but the strong security tie with the United States and the slowly improving force structure weigh positively in the balance.

The rapid economic development of Japan and the newly industrialized countries of the East Asian rim, together with the growth of the Chinese economy, broaden the economic basis for developing the self-defense capabilities of friendly regional countries. The United States is pursuing economic and security policies that tie these countries more closely to the free world community of nations. It is clear, however, that technology transfer and security issues warrant continued attention if we are to prevent our own weapons from falling into the hands of regional or superpower rivals.

Thus from the Soviet perspective, the long-term trends in East Asia are negative, especially in the context of the worldwide competition with the West.

7. The Maritime Balance

Maritime capability to protect our sea lines of communications remains crucial to Western security. As a result of our substantial shipbuilding program and more effective strategies to take advantage of Soviet concepts of operations, the overall maritime balance is improving.

The Soviet navy concentrates on the protection of their SSBN forces and the destruction of opposition SSBN forces. This focus is, of necessity, being expanded in light of U.S. deployment of SLCMs on both surface ships and submarines. In finding and attacking U.S. and Western SSBNs and SLCM platforms, Soviet capability is most likely declining, as Western platforms become more numerous, capable, and dispersed.

The Soviets continue to expand their modern SSBN force and upgrade the quality of their attack and ballistic missile submarines. By the early 1990s, these improved platforms will be the majority of the Soviet submarine inventory. Furthermore, they are producing large numbers of capable surface combatants. The newer Soviet surface ships -- Kirov, Slava, Udaloy, and Sovremennyy for example -- are all larger and much more capable than their predecessors. The land-based contingent of Soviet naval aviation continues to receive new Backfire bombers, and older Soviet air force Bear aircraft are being reconfigured to expand their at-sea strike capability. Meanwhile, the sea-based leg of naval aviation continues to explore Vertical/Short Takeoff and Landing (V/STOL) aircraft development. The Soviets are also working on a follow-on aircraft carrier that will probably come into active inventory by 1990. It may eventually be configured to support conventional takeoff and landing aircraft. The continuing deployment of high-performance antiship cruise missiles on submarines, surface ships, and particularly on aircraft will make fleet defense more demanding for us. Of course, the West is also deploying such weapons in its navies, severely complicating the Soviet defensive problem.

U.S. programs enhance our maritime capabilities in several key areas. The 600-ship Navy program will result in 15 deployable aircraft carriers; the addition of substantial numbers of Aegis air-defense cruisers and destroyers; more, and more capable, Los Angeles-class submarines (with a follow-on attack submarine in the early 1990s); more amphibious lift in newer and more capable ships; and new mine warfare ships. We are also modernizing our naval aircraft both sea-based and land-based. In addition to its own improvement programs, arrangements between the Navy and other Services enhance maritime operations, particularly by providing AWACS surveillance and airborne tanker support. Together these additions will greatly improve our ability to meet the evolving Soviet maritime threat.

In sum, the maritime balance, while favorable, is becoming progressively more complex. We estimate that the Soviet navy will remain predominately a submarine force into the next decade but will have enhanced surface and air/missile forces. It will continue to outnumber the U.S. Navy, particularly in submarine forces. The Soviets will take another small step toward improved sea-based tactical air capability when their large, new carrier goes to sea, but the United States will retain an overwhelming advantage in such forces. The antisubmarine warfare picture will be complicated by the improved platforms on both sides, but the United States will retain an advantage. The focus of the Soviet navy on the mission of SSBN protection has limited the forces available for other tasks. The U.S. Navy also continues to hold a substantial lead in sustainability at sea and in its ability to support and operate the new and more complex ships entering the inventory.

8. The Power Projection Balance

While the United States retains superior overall power projection forces, Soviet improvements in this area are disturbing. Several developments could have a significant impact on the power projection balance over the next decade. These include the deployment of the Condor aircraft that greatly increases Soviet cargo airlift capacity, and the ongoing replacement of Cub airlift aircraft with new Candid models. A second development is the near-term operational deployment of wing-in-ground-effect (WIG) vehicles in an amphibious role. The speed and range of these vehicles would enable the Soviets to deploy a significant force quickly into crisis areas on the Soviet periphery. A third lift-related program is the development of air-cushioned vehicles (ACVs) for Soviet amphibious forces. The Soviets lead the world in developing ACVs for amphibious use. Such platforms could add considerable assault flexibility when used with merchant ships during amphibious operations.

In terms of sea-based airpower, the Soviets, as previously noted, are building a large aircraft carrier that is expected to be operational by 1990. Though this vessel will not have the power projection capability of similarly sized U.S. carriers, there are many indications the Soviets will develop larger carriers that copy U.S. carriers in size and capability. The Soviets have also been experimenting with employing V/STOL aircraft from reconfigured roll-on/roll-off (RO/RO) ships. Collectively, these developments have expanded the Soviets' capability to provide air support for their forces in areas where land-based tactical air support cannot be brought to bear. The inventory of Soviet V/STOL aircraft is relatively limited however, and it may be the next century before any significant number of conventional takeoff and landing units might be available. Until then, Soviet air superiority for support of power projection forces will be available only on the Soviet periphery or against Third World countries with limited air forces.

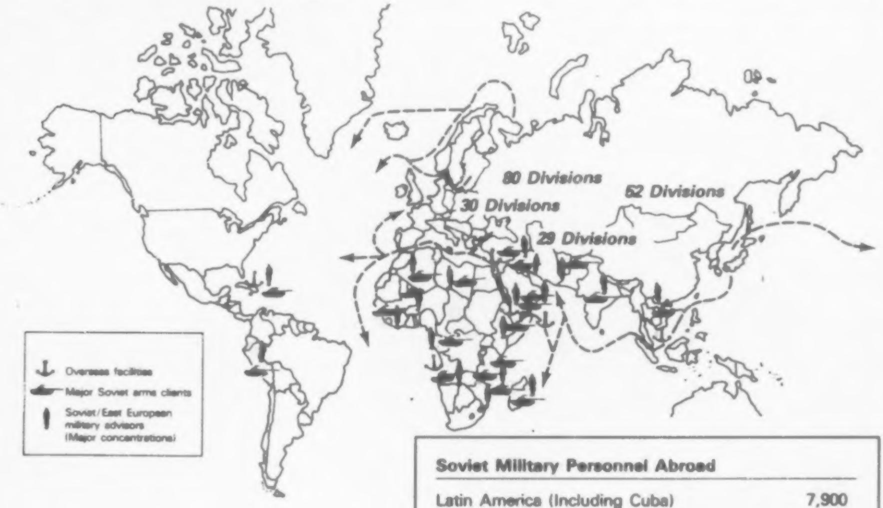
The continued expansion and modernization of the Soviet merchant marine contrasts starkly with the declining U.S. merchant marine. The Soviet fleet is a large, flexible, and readily available asset for strategic lift. Moreover, it is being equipped with vessels that will support amphibious forces. The current Soviet inventory of RO/RO and roll-on/float-off (RO/FLO) ships, for example, consists of 84 units with 28 additional ships on order. This represents an addition of seven to eight ships per year since they first entered the inventory in 1974. The average RO/RO ship in the Soviet force can carry 125 T72-sized tanks, and 84 RO/RO ships can transport the unit gear and equipment for more than four Soviet motorized rifle divisions in a one-time lift. Most of the remainder of the merchant force has also been configured for military uses.

At the lower end of the power projection spectrum, the Soviets use arms transfers as one element of a comprehensive effort that includes military and security advisors, proxy troops, covert action, and finally Soviet troops (as in Angola, Afghanistan, and Ethiopia) if U.S. intervention seems unlikely. This is an old business for the Soviet Union, but one in which it has a significant advantage over the United States. This advantage grew in the 1970s with the imposition of constraints on various countries that could receive U.S. arms transfers, and on the use of military advisors and covert operations -- none of which hamper equivalent Soviet activities.

Soviet power projection capabilities and the geographic expansion of Soviet presence are mutually reinforcing. As illustrated in Chart I.D.4, these activities have provided the Soviets with access to facilities and ports near the world's major trade routes and energy resources, threatening U.S. interests as well as those of its friends and allies. In a major NATO/Warsaw Pact or global conflict, for example, Soviet forces currently deployed abroad could, at the onset of hostilities, attack Western naval forces and impede the flow of forces and supplies to the theater of conflict.

Chart I.D.4

Soviet Global Military Reach


80 Divisions
52 Divisions
30 Divisions
29 Divisions
Overseas facilities
Major Soviet arms clients
Soviet/East European military advisors (Major concentrations)

Soviet Military Personnel Abroad	
Latin America (Including Cuba)	7,900
Sub-Sahara Africa	3,600/4,000
Middle East & North Africa	8,000
Asia (Including Vietnam)	2,500
Afghanistan	115,000

Soviet military assistance to Third World countries remains one of Moscow's major instruments for gaining access and influence around the world. Since 1980, as shown in Chart I.D.5, the Soviet Union has delivered far more major weapons systems to the Third World than has the United States. In contrast, U.S. economic assistance to promote development in these regions has far exceeded that of the Soviet Union.

Chart I.D.5

Comparison of Major U.S. and Soviet Equipment Delivered to the Third World

(1981 – Mid-1985)

	Total		Near East and South Asia		Sub-Saharan Africa		Latin America		East Asia and Pacific	
	U.S.	*USSR*	*U.S.*	*USSR*	*U.S.*	*USSR*	*U.S.*	*USSR*	*U.S.*	*USSR*
Tanks/Self-Propelled Guns	2,711	3,815	2,256	2,750	20	580	23	400	412	85
Field Artillery	1,965	5,365	917	2,825	177	1,530	344	770	527	240
Supersonic Fighter Aircraft	457	1,550	277	985	6	290	33	100	141	175
Helicopters	181	775	26	530	0	125	113	80	42	40
Surface-to-Air Missiles	3,441	8,860	1,857	7,095	30	645	0	860	1,554	250

The nature of the two countries' military assistance programs is quite different. While the Soviets emphasize major weapons systems, the United States provides more spares, follow-up support, and technical and training services. While the Soviets seek to foster military dependency, we try to stimulate greater self-reliance. The Soviets flood recipient countries with more than 20 times the number of permanent military technicians the United States assigns abroad to manage its military assistance program.

The United States has made substantial improvements in its power projection capabilities over the last five years, both in lift and in the forces to be lifted. About ten times the size of the equivalent Soviet force, the U.S. Marine Corps is substantially upgrading its assault lift capability. The Army is fielding light, more rapidly deployable divisions. Finally, a substantial prepositioning effort has been undertaken to facilitate rapid response in crises.

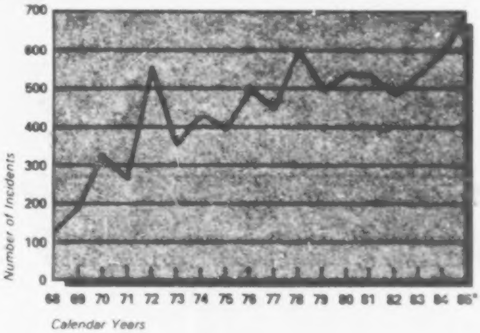
Thus, while the overall balance continues to favor the United States, and while programs in place will enhance our ability to move and support our forward-deployed forces, we will remain at a disadvantage at the lower end of the power projection spectrum. The military capabilities of the Soviet merchant marine, the impending expansion of the Soviet airlift force, the expansion of Soviet sea-based air forces, and the advent of new platforms are expanding Soviet options in areas of U.S. concern.

9. Other Threats to U.S. National Interests

Terrorism, local warfare disrupting world resource supplies, Marxist-sponsored insurgencies, and regional conflicts all pose challenges to our security. In 1985, the military forces of 29 countries were involved in conflicts in five major areas of the world: Europe, Latin America, the Middle East, Africa, and Asia. Each of those areas and many of the countries involved are of importance to the United States. Hence, instability in these areas creates new opportunities for exploitation disadvantageous to the West.

Moreover, the proliferation of advanced conventional armaments and nuclear weapons, coupled with the increasing threat posed by chemical and biological weapons, portend even more ominous challenges in the years ahead. Eleven nations outside the NATO and Warsaw Pact alliances currently have chemical weapons in their arsenals, and at least two more nations are in the process of acquiring them. More nations now have such weapons than at any other time in history. Our military and security forces must be prepared for the possible use of these weapons by other military forces and terrorists.

Chart I.D.6
International Terrorist Incidents
(1968 - 1985)



*Preliminary estimate as of 30 November

Terrorism has become an unfortunate and ever increasing fact of international life. Americans have been attacked in 72 countries since 1968, and American citizens and property are now targets of about 30 percent of all international terrorist incidents. Attacks in 1985 left 22 Americans dead and 185 wounded. Recent major terrorist attacks such as the June 1985 killing of U.S. Marines in El Salvador, the August 1985 bombing at Rhein-Main, the November 1985 bombing at Frankfurt, West Germany, and the Christmas massacres in Rome and Vienna, demonstrate vividly the increasing threat to U.S. citizens and facilities worldwide. Nor is the United States alone as a target. The mining of the Red Sea is an example of a terrorist threat directed against the shipping of all nations. The United States will continue to seek a more active defense against terrorist attacks throughout the world. We are urging each nation to provide appropriate safeguards against terrorism. At the same time, we are consolidating key intelligence assets and seeking the help of other nations in containing the further spread of terrorism.

Low-level terrorist threats to our security generally lend themselves to responses short of direct intervention by American armed forces. But we cannot exclude the possibility of threats to our citizens or interests, or to those of our friends, that might require the employment of our military forces. In such instances, the flexibility, mobility, and special training of U.S. forces will be important in meeting whatever threat may arise, as demonstrated last October when we captured the terrorists who hijacked the Achille Lauro.

10. Overall Assessment

Despite some notable deficiencies, the strategic balance today is essentially stable. Our strategic modernization programs will ensure that this remains the case, provided that the Congress allows these programs to be completed. In Europe, NATO continues to maintain a credible capability to deter a Warsaw Pact attack. In Southwest Asia the balance favors the Soviets, but the long-term trends may shift this balance to our advantage. In East Asia, the balance favors the Soviets, but with our current modernization programs the long-term trends favor us and our Asian allies and friends. The maritime balance favors us, but is becoming increasingly complex and difficult to assess. The power projection balance still favors us, but this is one of the most dynamic areas of Soviet activity. We must, therefore, continue to monitor carefully Soviet programs aimed at enhancing their force projection capability. And finally, terrorism is a growing, shadowy threat that we must combat with the other civilized nations of the world.

E. REASSESSING OUR CONCEPTUAL ARSENAL: PILLARS IN A DEFENSE POLICY FOR THE 1990s AND BEYOND

Most of the conceptual apparatus that shapes our thinking about what forces we need and how they would be used was formulated in the 1950s and early 1960s. Consider the list: nuclear deterrence, extended deterrence, escalation control, strategic stability, offense dominance, flexible response, counterinsurgency, limited war, and escalation ladders. These concepts have not only shaped the main lines of forces, doctrines, and plans we manage today, but they continue to shape our thinking about the uses of these forces and about what forces we need for the future.

What was the dominant feature of the 1950s in which these ideas were first formulated and applied? It can be summarized in two phrases: American nuclear preeminence, and American military superiority. In the nuclear arena we had a decisive advantage. Across the board in military forces, we invested more than the Soviets and had a margin of superiority in most military dimensions.

That era has vanished. Through an effort that consumes more than twice as large a percentage of their GNP as U.S. defense spending, the Soviet Union has become a military superpower. Whether the United States should be willing to accept a position of parity in military power with the Soviet Union over the longer run can be debated. But about our current defense programs, there should be no illusions. We are not trying to regain the earlier margin of advantage. Rather, we are struggling to win the resources to ensure parity in military power.

What does this transformation of the military balance imply for the relevance of our basic strategic concepts? Should ideas formulated in an era of American military predominance apply with equal validity in an era of parity?

The world has changed profoundly since the 1950s and early 1960s, when most of our conceptual arsenal was formulated -- so profoundly that some of these concepts are now obsolete. Thus as we reaffirm the central concepts of postwar American policy, we are reformulating others and reaching out for new ideas in a search for ways to make our deterrent more effective.

This Administration's boldest strategic departure is the Strategic Defense Initiative (SDI), a radical rejection of benign acquiescence in reliance upon the threat of mutual destruction. The Administration's position on uses of American military force represents an analogous rejection of previously accepted wisdom about limited war. Nor are these two ideas the sum of the matter. On arms control, this Administration came into office with a very different approach from those who had negotiated and proposed to accept SALT II. We insist on actual, major reductions, not a license for the Soviets to expand their forces. We believe that it is essential to persist in the continuing reassessment of the inherited conceptual arsenal -- a task that will challenge the strategic community for many years to come.

In what follows, I outline four pillars in the defense policy by which we seek to achieve a more stable deterrence for the 1990s and beyond. These four pillars are: SDI and secure nuclear deterrence; uses of force and secure conventional deterrence; a strategy for reducing and controlling arms; and competitive strategies for deterrence.

1. Strategic Defense Initiative and Secure Nuclear Deterrence

The President's Strategic Defense Initiative stuns many traditional thinkers who seem incapable of thinking beyond the conventional and accepted wisdom. In fact, strategic defense represents a natural extension, the capstone of an array of changes in our strategic nuclear forces, motivated by the search for a more secure deterrent. It offers a far safer way to keep the peace.

Critics of strategic defense are often proponents of mutual assured destruction (MAD). MAD describes a condition in which after suffering an all-out nuclear first-strike by an adversary, either superpower would retain the nuclear capability to destroy its opponent as a modern society. That is why I call it a mutual suicide pact. Currently, both the United States and the Soviet Union have the capacity to destroy each other. According to advocates of MAD, this mutual suicide pact is the bedrock of strategic stability. Because each has the capability to destroy the other's society, it is argued, neither can contemplate war, and war is therefore deterred. Indeed, some MAD proponents advocate actions to make nuclear war as horrible as possible, since that makes it as unthinkable as possible. Many oppose all defense, from civil defense to strategic defense. Some even attempt to rewrite the history of U.S. policy to claim that the United States embraced MAD and based its deterrent in the 1960s and early 1970s on retaliating against Soviet cities. This, of course, was never the case, and for good reason.

This MAD logic ignores three fundamental questions. First, would what amounts to a suicidal response have sufficient credibility to deter all Soviet attacks? Second, what form of deterrent retaliatory threat would be most moral and effective? And third, while secure retaliatory deterrence is necessary today, can we not move to a safer world in the future?

Is a nuclear deterrent that simply threatens the end of modern society credible? If the Soviet leadership believed that in response to a nuclear attack by them, we would be forced to choose between suicide and surrender, might they believe that we would not respond to an attack at all? Would deterrence not be weakened? To avoid that dilemma, every president and every secretary of defense since the early 1960s has maintained the capability to respond to a range of possible Soviet attacks with a range of appropriate options. This Administration has continued, indeed accelerated the development of more selective, discriminate, and controlled responses. Such limited options both pose a more credible threat to meet any level of Soviet attack and increase the likelihood that escalation could be controlled and collateral damaged minimized.

Misguided critics have sometimes confused our efforts to create credible response options for the purpose of deterring Soviet aggression with a malign intention to fight limited nuclear wars. Some have even gone so far as to confuse prudent planning for deterrence with insensitivity to the horrors of nuclear war. Nothing could be further from the truth. No one who has received as many briefings on nuclear weapons, or has participated in crisis exercises, as I have, could hold any doubts about the absolute necessity of avoiding nuclear war. It is precisely because of this necessity that the United States must have a secure deterrent.

Moreover, the policy of developing selective, discriminate responses is manifestly moral. It is not in our interest to inform the Soviets precisely how we would respond to every possible contingency. Nor is it possible to be certain that our efforts to limit escalation and terminate a conflict once begun would succeed. But it is imperative that we take every step possible both to deter war and to limit the destruction of any conflict, despite all our efforts to prevent it. Without credible limited options, our critics' view that any response to a Soviet attack would automatically lead to mutual suicide could become a tragic self-fulfilling prophecy. In short, while our policy cannot guarantee success, our critics' policy can only guarantee failure.

The knowledge that any conflict between the United States and the Soviet Union might escalate to nuclear catastrophe is certainly part of deterrence today. But that knowledge also impels us to ask whether there is not a better way to provide for the defense of the West. Because nuclear deterrence is necessary today, we must seek to make it secure, yet because it poses dangers, we must seek better alternatives for the future. The President and I believe that the answer lies in the Strategic Defense Initiative.

We hope that strategic defense will eventually render nuclear missiles obsolete. That is our long-range vision. But we have already rendered obsolete one of the concepts of the MAD logic: the belief that deterrence must rest on the threat to destroy a certain high percentage of the Soviet population. We do not, in fact, plan our retaliatory options to maximize Soviet casualties or to attack deliberately the Soviet population. Indeed, we believe such a doctrine would be neither moral nor prudent. It is not moral because the Soviet people should not deliberately be made the victims of any U.S. retaliation to an attack launched by the Soviet leadership. It is not prudent because secure deterrence should be based on the threat to destroy what the Soviet leadership values most highly: itself, its military power and political control capabilities, and its industrial ability to wage war. The United States government knows that a nuclear war cannot be won. Our nuclear doctrine is designed to ensure that the Soviet Union's leadership also believes that a nuclear war can never be won -- however, they define victory -- and, therefore, must never be fought.

It seems to me there are three irrefutable arguments for President Reagan's SDI -- any one of which would be sufficient for the research program we have undertaken, and all three of which are, in fact, valid. They can be summarized as: Soviet breakthrough, Soviet breakout, and the very real possibility that American science and technology will achieve what appears to some to be an impossible dream. Let me address each in turn.

a. Soviet Breakthrough

Since the ABM treaty of 1972, the Soviet Union has spent at least as much on strategic defenses as on its extraordinary strategic nuclear offensive buildup. Soviet air defenses now include nearly 12,000 launchers for surface-to-air missiles, and a formidable array of radars and interceptors. The Soviet Union has exploited the one ABM system permitted by the ABM treaty -- the system around Moscow -- to upgrade, test, and gain experience in the operation of an effective full-scale defense against ballistic missiles. Moreover, for more than two decades, the Soviets have been investing heavily in precisely those technologies encompassed by our own strategic defense research program. While the Congress funded only 74 percent of our FY 1986 budget for SDI research, the Soviet Union continued spending ten times our level of effort on strategic defense.

Soviet hypocrisy on this issue reaches Orwellian proportion. Ten days after President Reagan outlined his plans for research aimed at establishing whether a strategic defense is feasible, Pravda printed a statement deploring the devotion of scientific talent to the development of such defensive systems. Among its key signers were: the man in charge of the Soviet strategic defense program, the designer of the most lethal Soviet strategic missiles, the head of the Soviet military laser program, the architect of the ABM system now deployed around Moscow, and dozens of their collaborators. In 1985, the Soviets have in place large phased-array radars on which a nationwide ABM system could be based. And among these, there is the radar now under construction near Krasnoyarsk, a radar that blatantly violates the ABM treaty.

This evidence leads us to conclude that the Soviet leaders have never accepted the theory of mutual assured vulnerability so favored by many Americans, a theory that served as the foundation of the ABM treaty. Indeed, the Soviet leaders have made a vigorous, sustained effort to reduce the vulnerability of their country, and especially of themselves. Not only are the Soviets ahead of us today in the development and deployment of strategic defenses, but they have invested so much more on these technologies and in so many different areas, that our SDI research program would be justified alone as a prudent hedge against a Soviet breakthrough -- if that were the only consideration.

b. Soviet Breakout

The argument about Soviet breakout follows directly. The Soviet commitment to strategic defense is so unswerving that we must consider the possibility of a real breakout from the ABM treaty. If they could deploy today a strategic defense that significantly advanced their interests, who doubts that they would do so, despite the treaty and their hypocritical criticism of our program? What prevents the Soviets from abrogating the ABM treaty is their calculation of what each of us would do in its absence. A vigorous American strategic defense program is thus essential to ensure that we do not awake some day to find the Soviets rushing to full-scale deployment.

c. An Effective Deployed U.S. Strategic Defense System

A third and most conclusive argument for our strategic defense research program is the very real possibility that science and technology can create a future in which nuclear missiles become less capable of their awful mission. This journey to a safer world will not be easy, or short. Our research program is the necessary first step. But given the record of experts' declarations about what could not be done in our future, I am dismayed by the arrogance with which some distinguished American scientists and others declare the President's dream impossible. Recall that Albert Einstein predicted in 1932: "There is not the slightest indication that (nuclear) energy will ever be obtainable. It would mean that the atom would have to be shattered at will." Such distinguished errors only strengthen my belief that we should continue a vigorous research program. The President's purpose and resolve is quite simply to do all we can to help create a much safer world for generations to come.

If we could defend our people, who would prefer to avenge them? If we could live secure in the knowledge that our survival did not rest upon the threat of retaliation to deter a Soviet attack, would this not be a preferable moral position? The search for something beyond reliance on retaliation is neither cynical nor naive. From the outset, we have insisted that progress toward an effective SDI will have to proceed hand in hand with arms reduction. A persistent and patient dialogue with the Soviet Union is a necessary condition for life beyond the shadow of the nuclear sword of Damocles.

Indeed, in pursuing SDI, we are not naive about the possibility of alternative modes of delivering nuclear weapons. Even a thoroughly reliable shield against ballistic missiles would still leave us vulnerable to other modes of delivery, or perhaps even to other devices of mass destruction. Despite an essentially leakproof missile defense, we might still be vulnerable to terrorist attacks against our cities. Our vision of SDI thus calls for a transition to effective defenses, including deep reductions in offensive nuclear weapons.

As the President has insisted from the outset, but his critics have refused to recognize, SDI is part of his larger goal to reduce reliance on nuclear weapons and the role of nuclear weapons in international politics. For the foreseeable future, nuclear weapons will be part of the inescapable backdrop of U.S.-Soviet relations. Even if at some future point the United States and the Soviet Union were to abolish all nuclear weapons, we cannot eradicate the knowledge of how to make them, nor the fact that other nations and terrorist organizations have that capability. This inescapable nuclear backdrop makes it absolutely essential that we should undertake every feasible effort to reduce to the lowest possible level the risk of nuclear war.

2. Uses of Military Power and Secure Conventional Deterrence

In November 1984 in a speech entitled "Uses of Military Power," I outlined six major tests that should be applied by the United States in deciding to commit U.S. conventional military forces to combat. I argued that U.S. military forces have an essential, but circumscribed and necessarily limited role in the larger framework of national power. That speech spawned a continuing debate both inside and outside the government. In light of that continuing commentary, let me now restate the key points I made.

a. The Limits of Earlier Theories of Controlled Escalation and Limited War

According to theories developed in the 1950s and early 1960s, limited war was essentially a diplomatic instrument -- a tool for bargaining with the enemy. As such, it had to be centrally directed by the political leadership, and applied with precise control. The gradual application of American conventional power, combined with the threat of increased and wider application of that power, would, according to the theorists, persuade America's opponents to accept a settlement while they avoided strategic defeat.

The fatal flaw of these theories of the 1950s was their neglect of the domestic political realities of American democracy. Both the theories, and the actual experience of Lyndon Johnson in Vietnam in the 1960s applied an 18th century approach to war. In that period, as Clausewitz noted: "War was still an affair for governments alone, and the people's role was simply that of an instrument."

The framers of the American Constitution rejected this concept of war. Our Constitution reserves for the Congress alone, as representative of the people, the right to declare war. In fact, prior to

Korea and Vietnam, except for occasional short excursions, presidents worked hard to build a public consensus before taking America to war. From 1939 to 1941, Franklin Roosevelt worked and waited to build a consensus, even as Europe was under siege. He had no other feasible option. Though he would have preferred to do so, President Roosevelt never considered sending American forces into combat without the approval of the Congress, and the assurance of support of the American people. In Korea, and then Vietnam, America went to war without a strong consensus or support for our basic purposes. Indeed, as one of my predecessors, Secretary Robert McNamara once observed:

> ***The greatest contribution Vietnam is making — right or wrong is beside the point — is that it is developing an ability in the United States to fight a limited war, to go to war without the necessity of arousing the public ire.***

As successive Administrations discovered, the American people had the final word. The "public ire" was "aroused" as perhaps never before -- and never again should the imperative of public support be ignored.

b. Six Major Tests to be Applied When the United States Is Considering Committing U.S. Forces to Combat

Despite our best efforts to deter or prevent such developments, situations will arise in which it may be appropriate to commit U.S. military forces to combat. This Administration's reading of the postwar period derives several lessons that can be stated as tests to be applied in facing such choices. These tests cannot be applied mechanically or deductively. Weighing the evidence in specific cases will always require judgment. But applying these tests to the evidence will make it clear that while there are situations in which U.S. troops are required, there are even more situations in which U.S. combat forces should not be used. These tests are:

- The United States should not commit forces to combat unless our vital interests are at stake. Our interests, of course, include interests of our allies.

- If the United States decides that it is necessary to commit its troops to combat in a specific situation, we must commit them in sufficient numbers and with sufficient support to win. If we are unwilling to commit the forces or resources necessary to achieve our objectives, or if the objective is not important enough, we should not commit our forces.

- If we do decide to commit forces to combat, we must have clearly defined political and military objectives. Unless we know precisely what we intend to achieve by fighting, and how our forces can accomplish those clearly defined objectives, we cannot formulate or size forces properly, and we should not commit our forces at all.

- The relationship between our objectives and the forces we have committed -- their size, composition, and disposition -- must be continually reassessed and adjusted as necessary. In the course of a conflict, conditions and objectives inevitably change. When they do, so must our combat requirements. We must continuously keep as a beacon light before us the basic questions: Is a vital U.S. interest at stake? Have we committed forces and resources sufficient for victory? Are our objectives clearly defined? If the answers are "yes," then we should continue to fight. If the answers are "no," then we should not be in combat. We must never again commit U.S. forces to a war we do not intend to win.

-- Before the United States commits combat forces abroad, the U.S. government should have some reasonable assurance of the support of the American people and their elected representatives in the Congress. Such assurance cannot be provided by a public opinion poll. The public elects a President as a leader, not a follower. He takes an oath to protect and defend the Constitution. The people also expect a Congress sworn to the same principles and duties. To that end, the President and the leadership of the Congress must build the public consensus necessary to protect our vital interests. Sustainability of public support cannot be achieved unless the government is candid in making clear why our vital interests are threatened, and how, by the use of American military troops, we can achieve a clear, worthy goal. U.S. troops cannot be asked to fight a battle with the Congress at home, while attempting to win a war overseas. Nor will the American people sit by and watch U.S. troops committed as expendable pawns on some grand diplomatic chessboard.

-- Finally, the commitment of U.S. forces to combat should be a last resort -- only after diplomatic, political, economic and other efforts have been made to protect our vital interests.

Each of these tests deserves lengthy discussion. For present purposes, several limited comments must suffice. American interests are nowhere etched in stone. We should never succumb to the temptation to define a perimeter of vital interests, as Dean Acheson did in early 1950, in effect announcing that certain areas are "beyond our strategic perimeter." This virtually, albeit inadvertently, invited North Korea, with Stalin's approval, to invade South Korea. Judgments about our vital interests will sometimes depend on the circumstances of the specific case and trends, as well as intrinsic values. Our vital interests can only be determined by ourselves and our definition of the threat.

In his discussion of "the common defense" in The Federalist Papers, Alexander Hamilton argued that, "it is impossible to foresee or define the extent and variety of national exigencies, or the correspondent extent and variety of the means which may be necessary to satisfy them. The circumstances that endanger the safety of nations are infinite...." For this reason, we can not only never say never; we can never think never.

The necessity to win requires a clearly defined, achievable objective -- not unlimited objectives. Leaving the objective undefined invites an escalation of ambitions in response to battlefield successes. In Korea, we paid the full cost of this lesson -- though this lesson still eludes many. There, our original purpose had been to defeat North Korean aggression and restore South Korea's territorial integrity. But as we accomplished that objective, our failure to be entirely clear about what we were fighting for left us vulnerable to the entreaties of those who wanted more. Without adequate assessment of the risks and costs, we crossed the 38th Parallel and pushed forward to the Chinese border, provoking Chinese intervention, multiplying our losses, and eventually leading to stalemate at the 38th Parallel. Again in Vietnam, failure to define a clear, achievable goal led to confusion, public frustration, and eventual withdrawal.

When we define a clear objective, we must commit the forces necessary to achieve it. Gradualism is inherently attractive to some almost always mistaken. It exaggerates the illusion of control, violates the strategic principle of concentration of force, and encourages underestimation of the domestic political costs entailed by any use of American military forces abroad. If combat forces are required, they should be introduced rapidly and in the strength necessary to achieve our objective at the least possible cost. Where force has been committed to a peacekeeping, buffer role, as in Lebanon, and circumstances change, some will always discover some further objective that could be served by a continued American presence. Such forces cannot always achieve evolving objectives quickly, if at all. If, for example, a peacekeeping force, sized accordingly, cannot fulfill its mission because there is no peace, then it should be withdrawn.

No aspect of the doctrine I have enunciated for the use of force has received more comment and criticism than the requirement that we have reasonable assurance of the support of the American people. There can be no such assurance, the critics say. A government forced to wait for the people will be paralyzed in international politics. Recognizing this handicap, our adversary will be emboldened. Even if Secretary Weinberger had a favorable public opinion poll for use of force, as one critic puts it, who can guarantee that the public will not change its mind?

My purpose is not to wish away the frustrations of leadership in a democracy. Perhaps if President Roosevelt had been willing to act on his own authority in 1939, 1940, or 1941, the enormous losses of World War II could have been reduced. But perhaps, only by waiting until the full force of American public opinion was clearly mobilized behind the necessity of winning an all-out war was President Roosevelt able, with our allies, to secure the unconditional surrender of both the Nazis and the Japanese.

It is not necessary for me to argue that the considered judgment of the American people is always correct. My thesis is more modest, but more important. It is that American democracy is constructed on the principle not that the American people will always be right, but that there exists no better guide to wise policy. Our government, therefore, constructs a process that forces the President and the Congress to lead and argue, to seek and win the support of the American people in order to sustain a course of action. The inherent assumption here is that this will, in the long run, produce wiser choices than any other mechanism yet discovered. Our Constitution does not say that this process will be easy. As Churchill once remarked: "Democracy is the worst form of government known to man -- except for all the others." But our government is founded on the proposition that the informed judgment of the people will be a wiser guide than the view of the President alone, or of the President and his advisors, or of any self-appointed elite.

Taken together, these tests remind us of our most important and precious political feature: We are a democracy. Nothing distinguishes us more sharply from our Soviet adversary than the fact that whether at home or abroad, our government policy can be challenged and vindicated or reversed by a majority of the citizens. Any U.S. government that attempts to fight where our vital interests are not at stake, when we have no good reason to suppose there will be continuing public support, committing military forces merely as a regular and customary adjunct to our diplomatic efforts, invites the sort of domestic turmoil we experienced during the Vietnam war. Such a government has no grounds for expecting any less disastrous result.

The single most critical element of a successful democracy is a strong consensus of support and agreement on its basic purposes. While this makes the formulation and execution of foreign and military policy inherently more difficult than for governments not dependent on the consent of the governed, this difficulty stems from the source of our democracy's ultimate strength -- that we truly have a government of the people and by the people.

c. The Primacy of Effective Deterrence

The caution sounded by these six tests for the use of military force is intended. The world consists of an endless succession of hotspots in which some U.S. forces could play, or could at least be imagined by some to play, a useful role. The belief that the mere presence of U.S. troops in Lebanon or Central America or Africa or elsewhere could be useful in some way is not sufficient for our government to ask our troops to risk their lives. We remain ready to commit our lives, fortunes, and sacred honor when the cause warrants it. But the hope that a limited U.S. presence might provide diplomatic leverage is not sufficient.

It has been said that I am relentless in building up our military strength on the one hand, but reluctant to use our military forces on the other. I have noticed that our commanders who would lead our men into battle and have to order them sometimes to their deaths, are equally determined that the need for such final sacrifices must be fully warranted. Some critics will judge these dual commitments to strength and caution inconsistent. I believe that together they express both a vital truth and a profound paradox. Recognition of our democracy's inherent reluctance about asking our troops to die for their country places an even larger premium on the need to have the military power required to deter opponents. The central thread in the Reagan Administration's policy is to combine sufficient military strength with such a clear determination to resist aggression that we discourage challenges. By preventing the attack that would make necessary an American commitment of forces in response, we achieve our objectives without war. Peace through strength is more than a motto -- it is a fact.

What fires this Administration's determination to build up our conventional military capabilities, emphasize readiness and sustainability, and reduce reliance upon nuclear weapons is our commitment to make conventional deterrence work. The stronger our conventional deterrent, the less likelihood of an attack, and the lower the risk of war. The more vigorous our conventional deterrent, the less we must rely on the threat of nuclear retaliation.

d. The Premium on Other Currencies of Power

National power has many components, some more tangible -- like economic wealth, technological skills, and human capital -- others less so, such as moral force or national will. Military forces are but one of these multiple currencies of power. A democratic nation that will commit military forces to combat only as a last resort, must rely even more heavily on these other instruments of power in protecting our values and promoting our interests. Many in American politics have misread the lesson of Vietnam. They say that to avoid the risk of mistaken involvement of U.S. military forces, the United States should abstain altogether from the use of other instruments of

American power in the Third World. They regard any involvement as a slippery slope that may result in war. Thus, they oppose economic aid, political support, military aid, sales and training, and covert action in support of American interests in Central America and elsewhere.

My conclusion is just the opposite. These critics, it seems to me, have turned the problem precisely upside down. The United States has important interests in many Third World nations. We must therefore make more intelligent use of our various instruments of power on behalf of our interests -- to avoid the necessity of direct military combat. Because we do not mean to allow our military forces to creep -- or be drawn gradually -- into a combat role in Central America or elsewhere, we must have a policy designed to prevent the conditions that might create the necessity of committing American troops. This Administration has moved sharply to increase economic and military aid, sales and training, covert action, and political support -- all against some congressional opposition that does not yet see that by opposing those necessary measures, they may make it more likely that American troops will have to be used to prevent another Cuba or protect other vital interests.

Moreover, we stand up unashamedly for our central political values. We have no illusion that the road is short or easy. But we have no doubt that the forces of history are marching in the direction of democracy, personal freedom, market economies, and peace, and we proclaim proudly both our belief in precious human values, and our certainty that they offer far more to each individual than any other system yet devised.

3. A Strategy for Reducing and Controlling Arms

Reviewing the results of the SALT I interim agreement and the ABM and SALT II treaties, we can see why President Reagan has labeled this "pseudo arms control." The two premises behind the ABM treaty were that both sides would keep only permitted defenses, and that both would sharply reduce offensive forces. Neither of these premises proved true. While the United States chose not to deploy the full ABM system permitted by the 1972 ABM treaty and the 1974 Protocol -- and in fact dismantled its one ABM site in 1975 -- the Soviets not only have improved and upgraded significantly their Moscow ABM system over the past several years, but have invested as heavily in their strategic defense programs since 1972 as they have in their offensive buildup. In the mid-1960s, the United States ceased building silos for land-based ICBMs. In contrast, the Soviets leaped ahead in numbers and far ahead in throw-weight. In submarine-launched ballistic missiles, we stopped; again they raced ahead. Only in the area of total strategic nuclear warheads did the United States maintain an advantage, but Soviet programs could soon overtake that. In any event, merely counting numbers and warheads tells us little about relative strength because total numbers do not measure modernization, effectiveness, accuracy, throw-weight, or the advantages of various launching sysems. Harold Brown once summarized the phenomenon of constant Soviet additions: "When we build, they build. When we stop, they build."

Misinformed arms control advocates continue to talk about a spiraling arms race between the United States and the Soviet Union. Yet the facts are significantly different. Today, the U.S. stockpile of strategic offensive, defensive, and theater nuclear weapons has some 25 percent fewer weapons than it did in 1967. The megatonnage of this diminished stockpile is approximately 70 percent lower than it was in 1967. Moreover, in October 1983, the NATO alliance agreed to reduce by 1,400 the number of nuclear weapons deployed in Europe. These reductions are under way and, together with the 1,000 warheads previously withdrawn, will reduce the number of nuclear weapons in the alliance stockpile to the lowest level in 20 years.

While we cannot give similar precise estimates for the Soviet nuclear stockpile, we do know that the Soviets have added more than 7,000 new warheads to their strategic offensive systems since 1967 -- 6,500 of them since 1972, when the SALT I treaty was signed. Even with the SALT II restraints, the Soviet Union has built more warheads capable of destroying our missile silos than we had initially predicted they would build without any SALT agreement.

Treaty compliance -- or noncompliance -- is another verse in the same song. It was assumed that while the Soviets might exploit ambiguities, they would avoid blatant cheating. But even in the case of the ABM treaty, the Soviets have engaged in gross violations. Ignoring Soviet violations of arms control agreements will not make them go away. Indeed, reluctance on our part to respond can only encourage further Soviet noncompliance. The United States will continue to inform the Soviet Union of discoveries of its violations and give it the opportunity to discuss any ambiguous violations. But when we have determined that the treaty violations are deliberate and dangerous, we must respond. Arms control treaties are not like domestic laws, which can be enforced by civil authorities. Instead, arms control violations must be met by firm American reactions. The United States responses should be proportionate (though not necessarily identical in nature), and clearly in the United States' interests. The Soviet leadership must understand that the United States has no intention of accepting one-sided compliance with arms control agreements. Progress on this issue is essential if arms control is to remain a useful component of our national security policy.

Without exaggerating past mistakes, we must nevertheless learn from this experience of USSR violations of past treaties. The Reagan Administration's approach to arms control is quite different from that of his predecessors. Let me emphasize four key points.

First, President Reagan has insisted that we focus steadily on the goal: How to prevent nuclear war and build a more secure world so that this generation, and future generations, will live in peace with freedom. The President's proposition -- "A nuclear war cannot be won and must never be fought" -- bears repetition and contemplation.

The President's determination to ensure that a nuclear war will never be fought is the mandate for our defense program and arms reduction initiatives. Our goal can be stated simply: to ensure that the defense of America's vital interests never requires the United States to fight a nuclear war. In our approach to arms reductions, as in our overall defense programs, we seek to protect and defend vital U.S. interests by reducing the risk of nuclear war to the lowest possible level.

Second, arms reduction is a component of our larger national security policy -- not an isolated objective or independent instrument. Arms reduction is one of the ways in which we pursue our national security objectives. Recognition that arms negotiations and agreements are but a strand in the overall relationship between the United States and the Soviet Union brings into sharp focus a major dimension of any effective strategy for achieving arms reductions.

This dimension -- Soviet incentives -- was entirely neglected in the previous approach. What are the Soviets' incentives to agree to useful, effective agreements for real reductions? Even more vital, what are the Soviets' incentives to comply with what they have agreed to? In planning U.S. forces and acquiring arms, while simultaneously negotiating with the Soviet Union, it is necessary for us to create incentives for them to reach agreements that meet our interests. Why should the Soviets agree to reductions, if we reduce voluntarily without any corresponding Soviet reduction? Why should they comply, if we previously accepted their violations? Ask yourself: Why is General Secretary Gorbachev now proposing total elimination of nuclear weapons by the year 2000? Why indeed are they back at the negotiating tables they promised to boycott? Quite simply, it is the new strength and resolve we have demonstrated. Not only must we negotiate from strength -- this is in fact the only way we can negotiate effectively. It is not Soviet goodwill, but our strength that is bringing about their changes.

Third, negotiated, structural arms agreements must reduce arms, not legitimize increases. President Reagan has identified the primary criteria for acceptable, negotiated arms reduction agreements. They must significantly reduce the number of offensive systems, bring us to parity (measured not just by numbers of warheads but by effectiveness) at much lower levels than each side has now, be effectively verifiable, and contribute to a broad policy of strengthening peace and stability.

In view of past and current Soviet violations of arms control agreements, it is essential that future arms control agreements establish comprehensive verification regimes that reverse the current Soviet pattern of denial of information essential to verification, facilitate U.S. monitoring and deter Soviet cheating. Without such an effective verification regime, an arms control agreement will serve only to limit U.S. options and programs without providing assurance that other parties have been similarly constrained.

Fourth, beyond negotiated treaties about structures and numbers of weapons there lies an equally important array of initiatives that seek to control nuclear arms and reduce the risks that they might ever be used. These initiatives focus on factors that affect accidents, unauthorized escalation, communication capabilities, and the removal of ambiguities, misperceptions, and misunderstandings. This part of our arms negotiation agenda includes a large number of actions that the United States can take independently -- without Soviet concurrence or agreement -- but in ways that will actually reduce the risk of accidents, unauthorized use, or inadvertent escalation. Continuing improvements in our C^3 and warning systems will even further reduce the already low risk that the Soviets might somehow come to believe that a surprise attack might succeed and the equally low risk that our weapons could be used accidentally or in an unauthorized fashion. As we modernize our arsenal, we seek to improve weapons safety and command and control procedures.

Operational arms control also includes a number of bilateral and multilateral actions -- sometimes referred to as confidence-building measures -- that seek to reduce the possibility of conflict through accident, miscalculation, or failure of communications. During its first term, the Reagan Administration proposed several new initiatives to the Soviet Union. Some of them have met with success. In June 1985, both countries agreed to clarify their obligations under the 1971 "Accidents Measures" agreement to consult in the event of a nuclear incident involving terrorists. In October 1985, technical testing of the upgraded Moscow-Washington hotline was successfully conducted, and operational testing of the new facsimile capability is scheduled to commence in January 1986. In November in Geneva, President Reagan and Secretary Gorbachev agreed that both governments will examine the possibility of creating risk reduction centers to lessen the chances of miscalculation or accidental conflicts. We also have conducted a series of policy-level discussions on regional issues.

The Administration would like to do more. We would like to move forward with President Reagan's May 1985 proposal before the European Parliament to institute regular, high-level contacts between Soviet and U.S. military leaders and to exchange information on defense budgets and plans. We also will seek a positive Soviet response to proposals made by the United States and our allies at the Conference on Security and Confidence Building Measures and Disarmament in Europe (CDE) and the negotiations on Mutual and Balanced Force Reductions (MBFR) in Central Europe. The CDE proposals would provide for mandatory invitations to observe various military activities, including on-site inspection, as well as improved communications among Conference members. The MBFR proposals are a bold attempt to break the impasse existing in these talks for more than 12 years. NATO has postponed its long-time efforts to reach agreement on comprehensive reductions to parity of NATO and Warsaw Pact forces in Central Europe and has agreed to the basic framework proposed by the Soviet Union and its allies, for "first stage" limited reductions and a freeze on forces at existing levels for three years. In return, NATO asks only inclusion of reciprocal on-site measures sufficient to verify compliance with the agreement.

4. Competitive Strategies

Implementation of our overarching strategy of secure deterrence requires an array of competitive strategies that capitalize on our advantages and exploit our adversaries' weaknesses. In the long-term military competition with the Soviet Union, we must become more competitive. Even when U.S. military investment was substantially larger than that of the Soviets, it would have been advantageous to have more explicit strategies for competing. After a decade in which the cumulative Soviet investment was 50 percent greater than our own, it is essential that we rebuild our forces in ways that emphasize our comparative advantages.

We are not likely to regain the position we had in the 1950s. Even now, we are just matching the Soviet levels of weapons procurement (measured in dollars), and it will be the mid-1990s before the "dollar cost" of our weapons stock roughly matches that of the Soviets. Soviet research, development, test, and evaluation and military construction programs remain substantially larger than ours, as do a wide variety of nominally "civilian" programs designed to create a stock of militarily useful assets. In these circumstances, well-thought-out strategies for competing effectively with the Soviets are no longer something that it would be nice to have; they have become a clear necessity.

Competitive strategies require directing research and development (R&D) and procurement programs, adapting doctrine and concepts of operation, and changing organizations to exploit our comparative advantages. They mean a greater attention to the timing and phasing of U.S. initiatives, for example, introduction of new weapons or major modifications of weapons or tactics. A management strategy for competing in a particular area will have to provide for flexibility and adaptation to rapid changes in the environment and future Soviet actions.

An intelligent and sensible use of competitive strategies will allow us to maintain an effective force within budget constraints through the efficient use of resources. It will enable us to retain a secure deterrent without matching the Soviets plane for plane, ship for ship, and tank for tank. Even without much systematic effort, we have been able to benefit from such an approach in the past. For example, our shift to low-level bomber penetration operations exploited the Soviet concern about homeland defense, and thus contributed to large Soviet resources being diverted into air defense. Such a result was certainly preferable to allowing Soviet investment of those resources in offensive forces.

Another area where competitive strategy has produced benefical results is in antisubmarine warfare (ASW). Our ASW capability has reinforced the Soviet navy's defensive orientation, keeping them close to their homeland in order to protect their ballistic missile submarine fleet. This limits the Soviet navy's threat to our sea lines of communications with our European and Asian allies in the early period of war.

We must vigorously expand the number of areas in which we compete. We must develop thoughtful strategies based on areas of natural, sustainable U.S. advantage. Where possible, we should adopt strategies that make obsolete past Soviet defense investments. We should devise programs for which an effective Soviet response would be far more costly than the programs we undertake. If possible, we should try to move the competition into areas in which we have natural advantages and to channel Soviet defense efforts into areas that are less threatening to us and less destabilizing to the overall military balance.

a. Opportunities

There are a number of reasons for believing we can successfully develop strategies for competing more effectively in selected areas. We are entering into a period of rapid technological change that can work to our advantage. We have superior skills in the development of military systems embodying some of the leading technologies and superior manufacturing techniques and skills. Other opportunities can be uncovered by a closer look at Soviet military thinking, tactics, doctrine, and the character of their operational concepts. Such analyses should provide us with specific opportunities to counter their concepts of operation and thereby affect the Soviet military's own assessment of the prospects for successful military operations. While more difficult to assess, we may also be in a period in which the constraints on increased Soviet military expenditures are more substantial than they have been in the past, especially in certain technological areas.

b. Enhanced Intelligence

In order to capitalize on these opportunities and implement competitive strategies more effectively, we must fully understand our adversary and have a clear idea of his future programs and policies. This Administration has already committed significant funds to rebuilding our intelligence capabilities. In some areas, we have made remarkable advances. But we must do more. We must make concerted efforts to improve our understanding of Soviet perceptions, to identify Soviet weaknesses, and to assess trends in the military balances. By examining their military organization, their leadership, the morale of their troops, and even broader trends in their society such as alcoholism, illness, and demographics, we will not only know our enemy better, we will be able to attend to his weaknesses more effectively.

c. Building Competitive Strategies Into DoD Planning

Not surprisingly, this is the most difficult step of all. Adopting a new way of thinking is never easy for an individual. For organizations, it is even more difficult. We are exploring a variety of new ways to make competitive thinking part of our ongoing planning processes. Effective integration of this way of thinking into our processes, however, must engage all our military Services, their subunits, and their respective research and development organizations. We have strengthened and integrated planning as defined within the PPB (Planning, Programming and Budgeting) process by giving a Deputy Under Secretary oversight for this role. Nevertheless, people and organizations throughout DoD must search for feasible strategies of intelligent competition.

I have decided to make competitive strategies a major theme of the Department of Defense during the remainder of this Administration. I will include more of the key technologies and systems that embody significant competitive advantages in my Secretary's Performance Review -- which has proved our most effective mechanism for speeding acquisition and ensuring realistic budgeting. In the Services' proposals for new systems and in presentations about ongoing systems, they will be required to provide an analysis of how these programs exploit natural U.S. strengths and Soviet weaknesses. This will require that the Services fully utilize the products of the intelligence community in developing strategy. Effective integration of this way of thinking must engage not only the military Services and their subordinate elements, but also those individuals in my office and the Joint Chiefs of Staff who must look across all the Services to determine the most efficient and effective mix of forces and the joint strategy by which they are employed. Because of the important role new technology may have in these strategies, the Under Secretary of Defense for Research and Engineering will have a major responsibility, as will others concerned with the use of these new technologies.

Our basic plan for developing strategies of competition will include a number of steps. First, it will proceed at many levels: national, Service, mission, and by specific technology. Second, we will analyze carefully Soviet strengths and weaknesses, and attend to U.S. strengths and weaknesses. Third, we will be inventive about alternative and robust strategies. Perhaps most important in the next few years, specific areas will be selected for development of competitive strategies. Emphasis will be placed upon development of robust strategies that are based on natural areas of U.S. competence and ~~strength~~, and on those Soviet concepts of military operations, tactics, and doctrine that present enduring vulnerabilities. Where strategically advantageous, development of new technologies and associated concepts of operation and tactics will be accelerated.

d. The Impact of Competitive Substrategies

The potential impact of competitive substrategies is illustrated by the decisive advantage achieved by American technology and Israeli tactics in the 1983 air war between Israel and Syria. The "score" in that air war was 86-to-1 against Soviet MiGs. Our new low observables technology provides a suggestive current example. If American technology were able to create airplanes, ballistic missiles, and cruise missiles essentially invisible to current Soviet radar technology, massive Soviet investments in defense against aircraft over the battlefield in Europe would be leap-frogged and rendered ineffective. If the United States had a capability to reach into the Soviet Union and destroy selective highly valued targets, Soviet confidence in any nuclear warfighting plan of theirs would be greatly reduced. While specific details of stealth technology are appropriately classified, publicly available evidence should suggest that these possibilities are not fanciful.

e. Conclusion

Where will our defense strategy of secure deterrence lead? If we persist in maintaining a balance of forces that permits the Soviet Union no easy territorial or political gain against our vital interests, to what end?

No one can say with assurance. But our hope is that over time, our determination to deny the Soviet Union any exploitable military advantage against our vital interests will persuade it to consider more attractive uses of its resources and its talents. We have no illusion that Soviet leaders will be persuaded by our words, or by any short-term demonstration of our commitment. But we do believe that in time, if we maintain a vigorous and effective deterrent, we not only can keep the peace, but we can move the Soviet Union toward peaceful competition.

Part II
Defense Resources

A. THE DEFENSE BUDGET

1. Introduction

a. Strategy, Requirements, and Resources

In the reality of today's world, the fulfillment of our national interests requires military strength to protect and keep the peace. Increasing uncertainty in the political stability of the world places a premium on a rational evaluation of the threats to our present and future security. We must develop a sound military strategy consistent with, and supportive of, our foreign policy goals. This strategy guides the development, acquisition, and deployment of U.S. forces in peace and, if need be, in war. The doctrine, manpower, logistics, and materiel requirements necessary to carry out that strategy must be sufficient to provide security against existing threats and also against future increases or changes in those threats.

The resources provided in the defense budget are the vital link between our military strategy and the forces we must develop and field to implement that strategy. Insufficient defense resources jeopardize our national security goals, not only by supporting lower force levels than necessary, but also by denying the proper mix of these defense resources to implement our military strategy. When this Administration took office in 1981, we found that such a situation existed. America's military posture had eroded to the point where its ability and capacity to fulfill its military commitments or to carry out its deterrent strategy were severely questioned.

b. Stewardship of the Nation's Security

The limited resources provided to defense through most of the 1970s resulted in a force structure that was insufficient to meet the requirements of our military strategy. The combat readiness of our troops had deteriorated, critical modernization programs had been deferred, and investment in future defense capabilities was seriously restrained. In response to that situation, this Administration made a commitment, endorsed by the American people, to restore our defense capabilities. We proposed a long-term investment of substantial financial resources to back up this commitment.

This program was a well-balanced plan to redress our existing shortcomings and ensure our long-term security. It did not propose an extended period of excessive real growth in defense funding. It included funding to provide real growth of more than 12 percent in 1981 and 1982, to restore neglected capabilities, and to begin the long-term modernization program of both active and reserve forces. This was to be followed by a few years of more moderate, but still historically high, growth to sustain the modernization program and support expanding forces. Then there was to be a continuing period of low but sufficient growth to support necessary expansions in the force and initiatives to meet future threats to our security. To be sure, significant financial resources would be required. But this measured and well-planned program would be more cost-effective than periods of neglect followed by necessary periods of crash spending on defense to catch up, precisely the situation that this Administration encountered upon entering office five years ago.

The Congress became a full partner in this effort, approving over 95 percent of our requests for FY 1981 through FY 1983. In FY 1984 and FY 1985, defense budgets continued to increase, but at a lower rate, as congressional commitment waned. Nevertheless, we were able to achieve significant accomplishments with the resources provided as inflation dropped and we continued to make more efficient use of defense resources. Despite well-publicized procurement horror stories, the vast majority of our programs are sound, have been properly funded, and are being effectively executed.

The American people can take great pride in the progress our military forces have made since 1981. Today, we have a stronger, prouder, and better-equipped military force than we have had in over 20 years. Bonuses, education assistance, better medical benefits, housing and quarters allowances, and other compensation initiatives have played a significant part in the success of rebuilding our manpower force. Fairer and competitive levels of pay have been achieved through annual pay raises granted to our military personnel, and this emphasis has been a major factor in accomplishing the qualitative and quantitative improvements in all Services. Recruiting goals have been achieved in each of the last four years, and reenlistment rates of first-term and career personnel have improved dramatically.

Improvements to the support and readiness of the force structure have been a primary objective of our defense program. Air Force tactical aircrews now fly 19 hours per month, up from 16 hours in 1980, while Navy aircrews experience nearly 24 hours a month flying time. Another area of emphasis has been logistics support, which is crucial to the day-to-day operations of our forces. Increased efforts have been placed on improving our ability to provide the supplies required in support of our forces; the transportation of materiel and equipment to our forces on a timely basis; the engineering, technical, and administrative support necessary for operational success; and the lift assets (both sea- and airlift) to support our worldwide contingencies.

We have developed and begun to implement a plan for maintaining a vigorous deterrence by modernizing our nation's aging forces, both conventional and strategic.

We have made major improvements in each component of our nuclear force structure -- the bomber force, the fleet ballistic missile force, and land-based intercontinental ballistic missiles. One hundred B-1B bombers will have been funded through FY 1986, and every one will be operational by the end of the decade. We have deployed air-launched cruise missiles (ALCM) on 100 B-52 aircraft, an advanced cruise missile is being developed, and development continues on the Advanced Technology Bomber (ATB) and Small Intercontinental Ballistic Missile (ICBM). We continue to build Trident submarines at a rate of one per year. The Trident II (D-5) missile, which will have greater accuracy and a larger payload than the Trident I missile, is under development and will be deployed in FY 1989. The modernization program for the strategic missile force was based on the President's Commission on Strategic Forces recommendation to deploy the Peacekeeper (MX) missile and to develop and deploy a Small ICBM. Ten successful flight tests of the MX have been completed, and initial production was authorized in FY 1984.

We have also expanded the size and striking power of our maritime forces. From FY 1982 to FY 1986, we funded the construction of 15 more warships than had been previously planned. During this period, a total of 88 major nonstrategic warships were approved for construction, including two nuclear-powered aircraft carriers and 15 CG-47 class cruisers. Four Iowa-class battleship reactivations have also been funded.

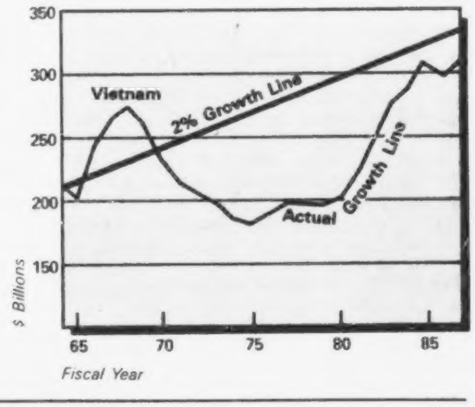
In addition, we have embarked on a broad program to improve the combat-effectiveness of our tactical air forces with increased purchases of F-14, F-15, F-16, F/A-18, and AV-8B aircraft, as well as with improved air-to-air and air-to-ground weapons. The Army is rebuilding its land forces capability with improvements in firepower, tactical mobility, and survivability by investing in such weaponry as the Abrams Tank, the Bradley Fighting Vehicle, and the Multiple Launch Rocket System.

We have also reversed the historic practice of equipping Reserve Components with outmoded and excess hardware. Selected Army National Guard units have received the Abrams Tank and Bradley Fighting Vehicle; Army Reserve Component units are flying the UH-60A Blackhawk helicopter; Naval Air Reserve squadrons are flying the F-14, F/A-18, and F-2C aircraft; the Naval Reserve Surface Force is operating Perry-class guided missile frigates; Air Force Reserve and National Guard squadrons have been flying F-16s since FY 1985 and the Air National Guard will fly F-15s by FY 1986.

The technological superiority that we enjoy over our adversaries today is a direct result of investments in research and development and the continued search for advanced technologies by industry, universities, and in-house laboratories. We have realized significant improvements in materials, optics, lasers, integrated circuits, software, computers, aeronautical propulsion, sensors, and other technologies that provide the foundation for future defense systems. Most important, however, has been the establishment of the President's Strategic Defense Initiative (SDI) to examine the feasibility of a concept that would enable us to move from a deterrence strategy based on nuclear retaliation to one based on defense against offensive weapons.

These improvements and successes notwithstanding, the lower levels of approved resources in FY 1984 and FY 1985 began to generate problems that we had hoped to avoid when we developed our long-term program.

Chart II.A.1.
Department of Defense Budget Authority
(FY 1987 Dollars in Billions)



It has become more difficult to finance support for the expanding force and continue to meet the requirements of our modernization program. We have had to delay some of our modernization objectives, and there is no doubt that the cost of our long-term program will increase. The result of this deviation from our original plan is that the level of real defense resources is still below that which would have been provided by a commitment in 1964 (prior to Vietnam) to an even modest 2 percent annual real growth rate (see Chart II.A.1).

2. Security Requirements and Fiscal Concerns

Reduced funding in FY 1984 and FY 1985 reflects for the most part congressional concerns about the federal deficit. Unfortunately, these concerns appear to have replaced security concerns as the basis for determining the necessary level of defense resources. Defense reductions have become a congressional tool for dealing with fiscal problems. However, just as we had cautioned, defense reductions did not have the desired effect on the deficit. Therefore, those who felt lower defense spending was the answer to a stronger economy proposed another solution to the budget deficit problem -- a defense budget freeze. As a result, last year the Congress would not provide even a modest 3 percent real growth in defense requirements, and the President reluctantly agreed to zero real growth for the FY 1986 defense budget. However, final congressional action on our request has produced the first negative growth in the defense budget since President Reagan took office. The steady, well-planned program for upgrading our current and future security based on a realistic evaluation of the threats to that security is being undermined by the prospect of the return to a period of insufficient resources caused by fiscal concerns.

This situation confronted us with a very real dilemma in the formulation of the FY 1987 defense budget. While fiscal concerns are forcing a reduction in approved defense resources and threatening the achievement of our security goals, the threat to our security continues to grow both in size and complexity.

One thing is certain -- defense budgets that consistently provide little or no real growth only exacerbate this dilemma, forcing decisions on the allocation of resources to which there are few right answers. Just as they cannot be expected to provide the necessary level of resources to meet our requirements, zero-growth budgets cannot be expected to reduce the threat.

Even though the Soviets face economic dilemmas more critical than ours, they are not contemplating a freeze or a slowing of the momentum in their current or future defense modernization. There are no reliable indicators that the Soviet arms buildup will slow or be frozen if we slow our own defense efforts.

Furthermore, zero-growth undercuts our effort to lead NATO to a stronger conventional defense. Our NATO allies have increased their financial commitment to the modernization and improvement of conventional defenses. Likewise, Japanese budgets are slowly increasing. By strengthening conventional forces, the United States and its allies have sought to restore a balanced and secure deterrent. However, just as our allies are increasing their commitment, we are seen as reducing ours.

No-growth defense budgets seriously undermine the improvements we have already made and delay indefinitely, with greatly added cost, the achievement of our long-term goals. Stretching out procurement of needed items postpones the expenditures, adds to the total cost, and jeopardizes key acquisition management reforms.

These funding constraints notwithstanding, our priorities remain quite clear. We must continue the investment program to meet future challenges, while providing sufficient resources to support the existing force structure and approved expansions in that structure. Therefore, the FY 1987 DoD budget reflects a major reevaluation of our requirements. We conducted intensive reviews to determine an effective mix of manpower and materiel resources to meet our requirements. The decisions we made were critical to the rational and orderly accomplishment of our short- and long-term security goals and objectives. They were not made without risk. But we believe this program will enable us to maintain today's wartime capability, while continuing the steady progress to improve our future capabilities. More importantly, it begins to regain the momentum we had lost.

3. Components of the FY 1987 Department of Defense Budget

a. Overview

The President's defense budget, shown in Table II.A.1, proposes budget authority (BA) of $311.6 billion for FY 1987, an increase of $22.2 billion over FY 1986. The tables in Appendix A provide budget data by appropriation title and by component.

Table II.A.1

Department of Defense Budget
(Dollars in Billions)

	FY 1985	FY 1986	FY 1987
Current-Year Dollars			
Total Obligational Authority (TOA)[a]	280.1	296.4	312.3
Budget Authority (BA)[b]	286.8	289.4	311.6
Outlays[c]	245.4	258.4	274.3
FY 1987 Dollars			
Total Obligational Authority (TOA)[a]	298.8	306.6	312.3
Budget Authority (BA)[b]	305.9	299.3	311.6
Outlays[c]	261.4	267.8	274.3

[a] **Total Obligational Authority (TOA)** represents the value of the direct defense program for each fiscal year, regardless of the method of financing.

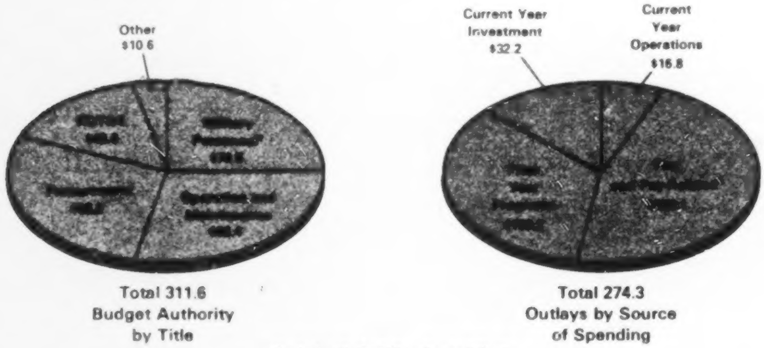
[b] **Budget Authority (BA)** permits the obligation of funds for immediate and future disbursement and is associated with the year the authority takes effect. Generally the difference between TOA and BA stems from the application of receipts that offset total budget authority.

[c] **Outlays** represent actual expenditures. Less than 64 percent of FY 1987 outlays will result from FY 1987 budget authority; the remainder will come from budget authority provided in earlier years.

The distribution of FY 1987 budget authority by major appropriation title and FY 1987 outlays by source of spending are shown in Chart II.A.2. Military Personnel (MP) and Operations and Maintenance (O&M) represent 52 percent of the DoD budget authority. This category includes payments to military and civilian personnel and the accrued retirement cost of the current military force; allocations for maintenance and repair of equipment; and for utilities, medical costs, training, petroleum and lubricants, and spare parts. The remainder of the budget contains funds for investment in research and development (R&D), procurement of weapons systems, and military construction and family housing.

Chart II.A.2

FY 1987 Department of Defense Budget
(Dollars in Billions)



Total 311.6
Budget Authority
by Title

Total 274.3
Outlays by Source
of Spending

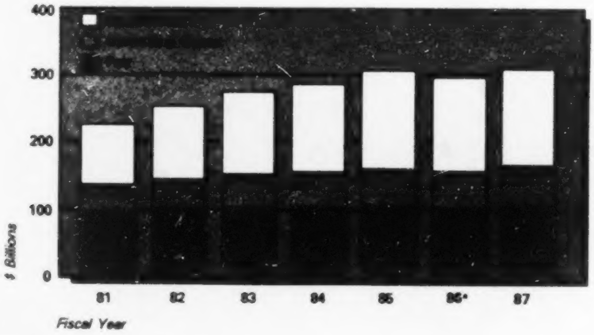
¹Includes Retired Pay Accrual Costs

Outlays in FY 1987 again will go primarily for current year operations (6.1 percent), pay and pay-related costs (45.6 percent), and prior year investment requirements (36.5 percent). Current year operations relate to the base structure and support costs. Outlays from prior year programs represent amounts already on contract and are largely a function of procurement and R&D investments made in previous years. Only 11.8 percent will be spent on new investment programs.

The FY 1987 budget reflects a balanced approach to funding personnel, operations, and investment (Chart II.A.3).

Chart II.A.3.

Department of Defense Budget Shares
(Budget Authority in FY 87 Dollars)



*Lower Budget Authority in the Military Personnel Accounts in FY 1986 reflects the congressional direction to finance $4.5 billion for the military pay raise and retirement accrual costs by transfers from prior year unobligated balances.

b. Personnel

The FY 1987 budget includes $109.2 billion to pay our military and civilian personnel. An Active Component military strength increase of 13,730 during FY 1986 enables us to meet the manning requirements of an expanded naval fleet and tactical air forces, and to maintain the necessary level of readiness and sustainability of our existing forces. National Guard and Reserve Component strength will increase by 4.5 percent providing additional depth and balance to the responsiveness and flexibility of the active force. Civilian end strength will be relatively unchanged from FY 1986.

After we had made significant progress in achieving pay comparability for the men and women serving in our Armed Forces, recent budgets have contained pay raises lower than those needed to maintain that comparability. This budget reaffirms our commitment to pay comparability by including a pay raise of 4 percent.

c. Operating Costs

The combat capability of our land, air, and sea forces is dependent, to a large degree, on the funds provided for support of those forces. These funds are used to train people, buy fuel and supplies to support their missions, provide communications for strategic and tactical command and control, perform depot maintenance on weapons systems and their components, and maintain facilities. Financial requirements of support activities are driven primarily by force levels and activity rates. These include the number and types of aircraft and squadrons, the number of aircraft missions and flying hours, the number of missiles and squadrons, readiness objectives, personnel strengths, the number of installations, and the quantity and complexity of equipment to be maintained. Once the force and activity levels have been set, support requirements are to a large degree fixed and cannot be reduced without decreasing the effectiveness of those forces.

The FY 1987 budget contains a balanced mix of programs necessary to support our growing forces. Continued improvement is expected in materiel readiness as a result of sustained progress in the operational availability of our equipment and the systematic training of our forces. Spares and repair parts procurement, equipment maintenance, and other logistical support requirements all receive high priority. Increases are provided for ship modernization, fleet outfitting, and aviation depot level repairables programs.

Other areas will also receive priority funding. Medical readiness will be improved by upgrading combat hospital facilities. Increased physical security will be provided at many installations both in the United States and abroad. The buildup of major and secondary item war reserves in Europe and Korea will continue. Our Reserve and National Guard Components will receive increased training and logistical support to continue their expansion and materiel upgrading.

d. Investment

A major goal of the FY 1987 budget is to sustain the force modernization program we commenced in 1981. The overall objectives of this program are to increase the survivability and endurance of our strategic forces and to make our conventional forces more responsive and flexible by improving their striking power and mobility.

This budget continues the President's commitment to modernize and improve all aspects of our strategic forces. This includes purchasing and deploying the Peacekeeper missile within congressional limitations and continued development of the Small ICBM; production of Trident nuclear submarines and procurement of the Trident II (D-5) missile; continued production of the B-1B bomber and development of the Advanced Technology Bomber; and development of the advanced cruise missile and short-range attack missile. Funding is also requested to improve our space surveillance and defensive capabilities, including the antisatellite program, and to upgrade and protect the survivability of our strategic command, control, and communications systems.

The Army intends to procure 840 M1 tanks and 870 Bradley Fighting Vehicle Systems to upgrade the firepower of our ground forces while providing them with greater tactical mobility and protection from enemy fire. The aviation component of the Army's combined arms team will be improved with the purchase of 144 AH-64 Apache helicopters. To provide added lift capability to assault-support troops and to improve the survivability of our ground forces, the Army will purchase 78 UH-60A Blackhawk helicopters and continue modification of its existing fleet of CH-47s, while the Marine Corps will add 14 CH-53s. Purchase of short-range missile systems such as the Army's Stinger and long-range missiles such as the Patriot, linked together by a network of radar, command and control, and electronic warfare systems, will measurably improve the defensive capabilities of our ground forces.

Our tactical air forces must be capable of maintaining air superiority and defending and supporting our ground and naval forces. In support of our modernization plans, we are requesting funding for 531 additional tactical aircraft for the Air Force, the Navy, and the Marine Corps. This will include 48 F-15 and 216 F-16 fighter aircraft for the Air Force, 15 F-14As for the Navy, and 120 F/A-18s and 42 AV-8Bs for the Marine Corps. Complementing these aircraft purchases are proposed buys of the Imaging Infrared Maverick antiarmor air-to-surface missile and the AIM-9M Sidewinder, AIM-7M Sparrow, and the Phoenix air-to-air missiles (see Part III-B-3 for specific information).

The substantial improvement in our naval forces toward its 600-ship goal is continued. By the end of FY 1987, we will have a total deployable battle force of 566 ships. Funding is requested for 24 ships, including 5 ballistic missile and attack submarines, 2 cruisers, 3 destroyers, 4 mine warfare ships, and 10 support ships. To improve our naval units' firepower, we are requesting 324 Tomahawk cruise missiles and 94 versatile Harpoon missiles.

The FY 1987 budget request for research, development, testing, and evaluation (RDT&E) continues investment in advanced defense technologies. Of particular importance is continuing research on the Strategic Defense Initiative (SDI) and developmental work on a small single-warhead intercontinental ballistic missile and the Advanced Technology Bomber to ensure the credibility of our deterrent strength into the 1990s. Expanded funding is requested for critical tactical programs that lay the groundwork needed to field affordable and reliable weapons and support equipment capable of meeting the threat today and in the future.

The Military Construction Appropriation request will continue the progress we have made in overcoming prior years' inadequate funding. Of special importance are programs to continue the modernization of our physical plant and improvements to working and living conditions for our Service personnel. Significant increases are scheduled for major and minor construction programs for the Reserve Components.

4. Budget Trends

In spite of significant improvements in our defense capabilities and our success in improving the management of defense resources, there are some who think that we have spent too much on national defense since 1981. A brief historical review of federal spending (Chart II.A.4) over the last 40 years demonstrates very clearly that this has not been the case. From 1950 to 1970, nondefense spending grew steadily while defense spending, except during the Korean and Vietnam war periods,. showed little growth. The precipitous rise in real federal spending since 1970 was principally the result of the continuous rising trend in nondefense spending. On the other hand, defense spending declined during most of the 1970s and has only experienced sustained growth since 1981.

Chart II.A.4
Total Federal Outlays

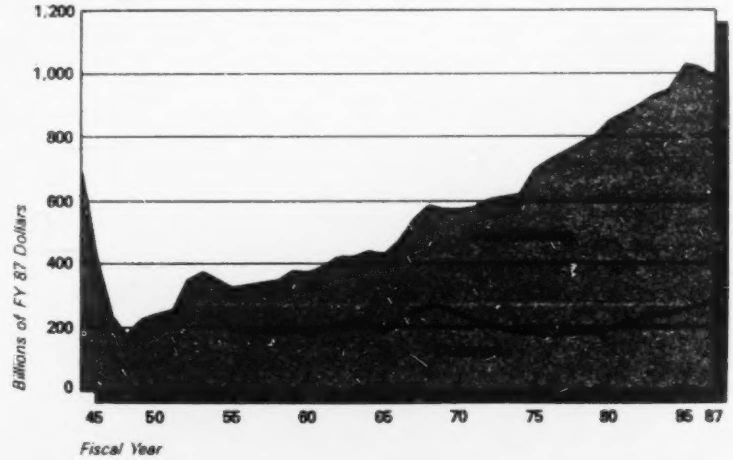


Chart II.A.5 further dramatizes this long-term trend in shifting federal spending patterns. Even after rising significantly since 1981, real defense spending in FY 1987 as a percent of total federal spending will still be less than it was from 1951 to 1972.

It is also instructive that increased levels of defense spending since 1981 have not taken a disproportionate share of our nation's wealth. The defense share of the nation's output of goods and services (GNP), based on the current estimates for defense outlays and economic growth, will still be below that experienced during the peacetime 1950s and 1960s (Chart II.A.6). Defense shares of the federal budget and economic aggregates are shown in Appendix A.

Chart II.A.5

Federal Budget Trends

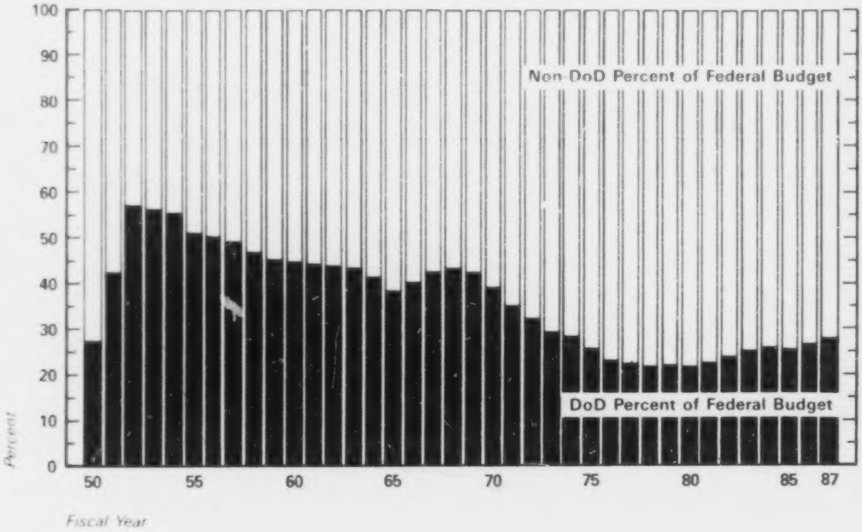
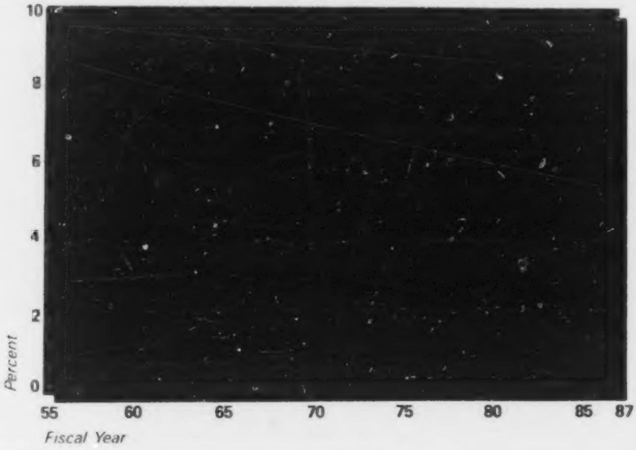


Chart II.A.6

Defense Outlays as a Share of the Gross National Product



5. Conclusion

It is the collective responsibility of this Administration and the Congress to ensure that we do not return to a period of neglect for defense requirements that could produce a serious deterioration in our capabilities and erode our defense industrial base. We must recognize that the FY 1986 budget takes us a step in that direction. If we allow fiscal concerns to outweigh security concerns, sooner or later we will be confronted with a situation, similar to that in 1981, in which we must again drastically increase our financial commitment to defense. Therefore, it is imperative that, beginning with the FY 1987 budget, we regain the momentum toward achievement of our long-term security goals.

Table II.A.2
FY 1987 Department of Defense Budget
(Dollars in Billions)

Budget Authority	FY 1987	FY 1988	FY 1989	FY 1990	FY 1991
Total, Current Dollars	311.6	332.4	353.5	374.7	395.5
Total, Constant (FY 1987) Dollars	311.6	321.1	330.4	339.8	348.9

The President's FY 1987-91 defense program reestablishes such a long-term commitment (see Table II.A.2). It provides moderate but consistent real growth to support our expanding force structure while continuing our long-term investment program. It supports our commitments throughout the world.

The defense budget cannot be regarded as a tool of fiscal policy at the expense of our national security goals. We cannot have a strong economy and a weak defense, nor can we have a stronger defense and continue to make large defense cuts. Therefore, this long-term program places the determination of national defense resources in the proper perspective -- based on security concerns rather than fiscal constraints.

We know that achievement of our long-term goals is going to take longer than we would like and is going to cost more than we had planned. We know that it is not without certain risks, although they have been minimized through prudent funding of a well-balanced program. But, most importantly, we know that regardless of the current economic situation, we cannot afford to abandon our security goals. Every day incidents throughout the world remind us that there has not been a reduction in the threats facing the United States, our allies, and other freedom-seeking people of the world. If we are to pass on a more secure legacy than we inherited, we -- this Administration, the Congress, and the American people -- are going to have to be firm in our resolve to achieve world peace.

B. MANAGEMENT REFORMS

1. Introduction

In the early 1980s, this Administration made a commitment to restore our defense and ensure our future security. We met this difficult requirement with the support of the Congress. Although congressional support has declined recently, we continue to persist in our efforts to ensure that defense dollars are spent wisely, and that management initiatives are given our complete support.

DoD has made significant progress in improving the management of defense resources. We are making a concerted effort to eliminate waste, fraud, and mismanagement through our Internal Management Control Program and Inspector General audits, inspections, and investigations. In addition, we support external management initiatives including Reform '88, the Grace Commission, and the newly created Packard Commission. In all of these areas, we have achieved management improvements that have reduced the total cost of national security to the American taxpayer.

2. Resource Management

DoD oversees vast resources. We employ 4.3 million personnel, including uniformed Servicemembers and civilian employees throughout the world. We manage approximately 1,240 major military installations and properties. Notwithstanding the complexity of managing these widespread resources, our priority is clear -- rebuilding American military strength as rapidly and efficiently as possible at the least possible cost.

a. Acquisition Initiatives

(1) Defense Acquisition Improvement Program

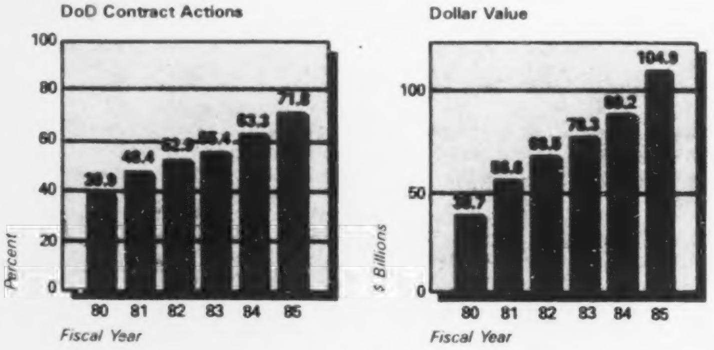
Most of the original 32 initiatives implemented under the Defense Acquisition Improvement Program (DAIP) have been fully integrated into the acquisition process. The Defense Council on Integrity and Management Improvement is focusing on implementing the remaining initiatives. Among our major improvements have been increased competition, more multiyear procurements, better economic production rates, improved readiness and support, more realistic budgeting, and greater program stability.

(a) Competition

Although perhaps the most challenging of the DAIP initiatives, competition has also been the most rewarding. The benefits of competition are evident -- competition encourages innovation and helps reduce costs and improve quality. During the past five years, we have taken a number of steps to increase competition and have achieved significant savings. The amount of dollars awarded competitively in the procurement of new ships alone has increased from 26 percent in FY 1981 to about 90 percent at the end of FY 1985. The number of annual competitive contracts has increased by 37 percent to over six million contracts since FY 1980. Chart II.B.1 shows the increase in the rate of competitive contracts, as well as the dollar value of these contracts, since FY 1980. In FY 1985, nearly 72 percent of all contract actions, amounting to $105 billion, were awarded under competitive contracting.

Chart II.B.1

Competitive Contracting*



*Includes competitive and follow-on to competitive contract actions.

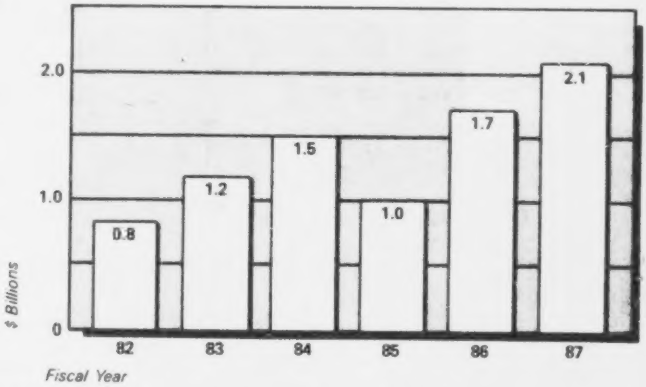
We also promote competition among prime contractors in procuring major weapons systems by carefully reviewing all systems and subsystems for dual-sourcing (allowing for two producers) prior to entry into full-scale development and during the program budget review. Currently, there are 44 major systems and subsystems being dual-sourced, including the air-launched cruise missile (ALCM) guidance system and motor, the alternative fighter engine, and the Sidewinder and Hellfire missiles.

(b) Multiyear Procurements

As consumers, we all know that it is often less expensive to buy products in bulk than in a piecemeal fashion. The same is true for defense procurements. The principal objective of our multiyear procurement initiative is to achieve savings through economical lot buys. Since FY 1982, when DoD first began using multiyear contracting for major weapons systems procurement, the Congress has approved 40 multiyear procurement contracts estimated to save about $6.2 billion over annual contracting methods. The multiyear programs that have provided the most significant savings include the B-1B ($1.2 billion), the KC-10 aircraft ($658 million), and the F-16 airframe ($256 million). In the FY 1987 budget, we propose seven programs for multiyear funding including F/A-18, Patriot missile system, and Stinger missile system, which we estimate will save approximately $2.1 billion overall. Chart II.B.2 shows our annual savings from multiyear contracts.

Chart II.B.2

Multiyear Procurement Savings



FY 82-86 Programs Requested: 60 **Programs Approved: 40** **Estimated Savings: $6.2 Billion**

FY 87 Programs Requested: 7 **Estimated Savings: $2.1 Billion**

(c) Economic Production Rates

It is more efficient to produce at higher production rates since equipment and manpower are not allowed to stand idle. In turn, higher production rates mean lower unit costs. More economic production rates for high-priority programs such as the AH-64 helicopter, Stinger missile, M1 Tank, AC/MC-130H aircraft, and KC-135 modifications have achieved valuable savings. Cost-avoidance savings for these five programs alone are approximately $1 billion.

(d) Readiness and Integrated Logistics Support

One of the principal objectives of our Defense Acquisition Improvement Program is to reduce program costs and improve the readiness of weapons systems by planning for life-cycle support during the early phases of the acquisition process. Support includes the purchase and management of spare parts and test equipment based upon historical usage rates. Toward this end, we have established a special research fund to provide continued improvements in integrated logistics support. In addition, we annually review logistics support requirements for weapons systems in order to provide the necessary funding. In FY 1985, we reviewed the logistics support requirements and funding for 30 major systems compared with 27 in FY 1984.

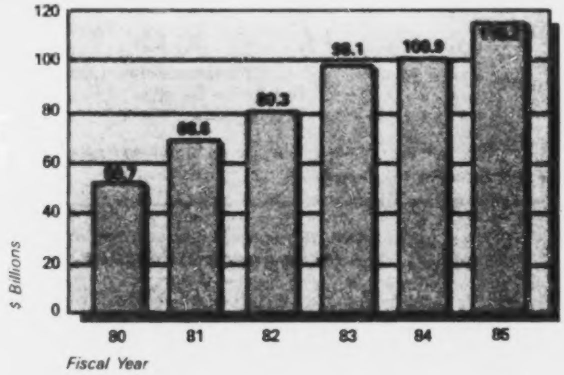
(e) Realistic Budgeting

Weapons systems take a long time to design and produce with many changes occurring during this process. This makes it extremely difficult to estimate and budget the correct amount of resources necessary to acquire a major weapon system. With more accurate estimates, we can avoid unanticipated costs.

We have introduced a variety of initiatives to provide more accurate estimates of major weapons systems. For example, we are applying more realistic inflation factors to cost estimates. During FY 1985, we conducted independent cost estimate reviews for 25 programs and adjusted funding as appropriate. We plan to continue these independent cost reviews for all major programs.

We also promote the use of fixed price contracts to discourage "buy ins" (where contractors bid unrealistically low to get a contract) and reduce cost overruns. As Chart II.B.3 illustrates, in FY 1985 nearly 40 percent of the defense budget, or $115 billion, was spent on fixed price contracts, representing a doubling of fixed price dollars since 1980.

Chart II.B.3
Funding Under Fixed Price Contracts



(f) Program Stability

Improving program stability can lead to even greater defense savings. While some program instability is unavoidable, stretch-outs and interruptions add millions of dollars to the taxpayers' burden with no concomitant increase in our security. As a result of budgetary constraints, we have been forced to stretch out our purchase of many systems. In turn, this has increased the cost of these systems. For example, by having to reduce the AH-64 program below the FY 1986 budget plan, the total program cost has increased by $125 million, because the price of the helicopter will be higher in the future.

We are improving program stability by controlling and reducing the number of programs that claim scarce defense resources. From FY 1983 to FY 1987, we reduced the number of new programs from fifteen to three. The new programs for FY 1987 are the Naval Airship, a long-endurance radar surveillance system for fleet units; and the Surface Ship Advanced Tactical Sonar (SSATS), an essential component for the next generation Surface Ship ASW Combat System.

(2) Joint Program Management

Making joint programs succeed requires the concerted effort of the Congress, OSD, OJCS, and the Services. Toward this end, DoD employs a number of high-level management bodies, such as the Joint Requirements and Management Board (JRMB), to address the opportunities and challenges of joint program development and management. DoD's objective is to enhance affordability while meeting interoperability requirements and improving logistical efficiency. Our search for joint program opportunities includes: surveying multi-Service mission requirements for common functions or related threats; resolving unnecessary differences in requirements and specifications; integrating requirements to get more economical production rates and more competition; and developing common, simplified training and logistic support bases.

Currently, there are more than 135 joint programs with a combined value of more than $20 billion in some stage of development or procurement. In addition, resolution this past year of inter-Service issues regarding the Joint Surveillance and Target Attack Radar System (JSTARS) and the Joint Service Advanced Vertical Lift Aircraft (V-22) are two examples of DoD's commitment to effective joint program management.

(3) Spare Parts Management

Economical spare parts procurement is essential to sound management of defense resources and to improved force readiness. DoD's 10-point program for ending spare parts abuse introduced in July 1983 provided the foundation for our current Spares Management Improvement Program. This program is making fundamental changes in the spare parts acquisition, management, and disposal process. To oversee this effort, we established the new position of Deputy Assistant Secretary of Defense for Spares Program Management. This marks the first time we have had a single office with responsibility for all aspects of spare parts management.

The Spares Management Improvement Program consists of more than 500 separate initiatives. Collectively, these initiatives form a comprehensive and detailed action plan. Some of the actions taken to reform spare parts management include:

-- Increasing spare parts competition. One technique for increasing competition is called "breakout," which allows DoD to purchase spare parts directly from the manufacturer or to open them up to new competition. In FY 1985, we reviewed 250,000 items and designated 54,000 for full and open competition. We identified another 51,000 items for purchase from the manufacturer, thereby eliminating "middle man" charges.

-- Exercising customer leverage. As a prime customer, DoD uses its leverage to obtain industry's cooperation in reducing prices. As a result, industry has voluntarily dropped many claims of exclusive rights to parts, established voluntary refund policies and refunded over $17 million to DoD, established their own employee awareness programs, and provided extensive data to help find cheaper sources for spare parts.

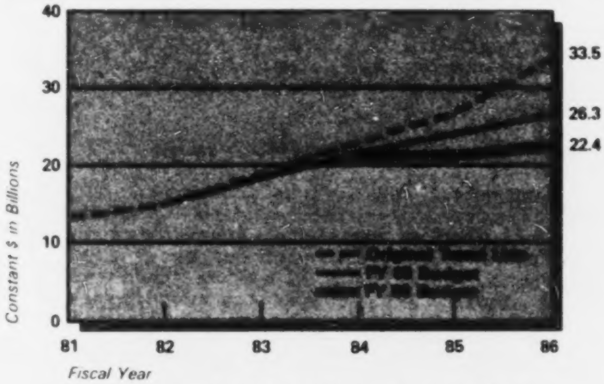
-- Improving price surveillance and control. To control prices, DoD established employee awareness programs; set up programs to flag price increases automatically over a preset threshold;

instituted programs to buy spare parts in larger, more economical quantities; made greater use of contractor "value engineering" proposals to save money; and performed more detailed analyses of what an item "should cost." Of the 3.6 million items that had a price change during FY 1985, 3.3 million (91 percent) showed a price decrease while only 300,000 (9 percent) had a price increase.

Our spare parts initiatives are working. As evidence of their success, DoD documented savings in excess of $2.5 billion in FY 1984 and FY 1985. As Chart II.B.4 shows, these initiatives have helped reduce the trend in spare parts spending by $11.1 billion from our projection made in FY 1984.

Chart II.B.4

Spare Parts Procurement[a]



[a] This chart represents a fully funded budget request that provides for significant increases in force levels, equipment modernization, and operating tempo.

(4) Unpriced Contractual Actions

Unpriced contractual orders identify those contractual actions authorizing contractors to begin work prior to a final agreement on price. Each unpriced order includes a ceiling limiting the government's liability. Unpriced orders are used: for urgent requirements such as safety of personnel or equipment, when it is in the government's interest to avoid a break in production, and to meet obligation schedules. During FY 1985, the Army was able to reduce its outstanding unpriced orders by approximately 35 percent. On November 12, 1985, the Assistant Secretary of Defense for Acquisition and Logistics directed the Secretaries of the Navy and the Air Force to reduce their backlog of unpriced orders by 32 percent from the FY 1985 level. The Army was directed to decrease its backlog by another 10 percent from the FY 1985 level. This will result in a significant improvement in this area in FY 1986.

b. Force Management and Personnel

A fundamental objective of management is to improve mission capabilities through more efficient use of available resources. This output-oriented management technique focuses on quality, technology, and the creative management of people in the work place. Over the last ten years, we have sponsored a series of manpower management initiatives including the identification of mission objectives and sizing of mission inputs, judicious investment in technology, safe use of available resources, and capitalization of the creative skills of our people.

One of DoD's manpower management initiatives, the Efficiency Review Program, focuses on using industrial engineering techniques to improve work methods and to achieve a better internal allocation of personnel. Resources released by this program are then available to meet increasing workloads elsewhere. For example, the Air Force completed 15 reviews of 8,119 of its military and civilian staff and realigned 784 positions to do other priority Air Force work.

We seek to achieve a higher level of output across DoD through the selective investment of funds in technology. DoD's Productivity Enhancing Capital Investment (PECI) program specifically targets funds for quick return and long-range, high-payoff investment initiatives. For instance, through FY 1985, the productivity investment fund element of PECI has returned $20 for every dollar invested and promises to save over $2.5 billion by FY 1990. We estimate that FY 1986 investments of $138 million will return lifetime savings of $2 billion.

The Safety and Occupational Health Program contributes to the improved productivity of our work force by providing for employee safety through preventive measures and safety training. We estimate that about $1 billion in direct costs are saved annually by avoiding accidents, injuries, and illness as a result of this program.

DoD has achieved additional savings and enhanced individual and organizational productivity by promoting participative management techniques and encouraging DoD employees to exercise their expertise and imagination in designing new and more efficient ways to get the job done. These personnel are then rewarded for their contributions. Four current programs are the Suggestion Program, Productivity Excellence Award Program, Quality Circles Program, and the Productivity Gain Sharing Program. Collectively, these programs have realized substantial savings since their inception.

We plan to use these already established programs to support the President's initiative for a government-wide productivity improvement program announced in July 1985. In keeping with the spirit of the President's initiative, we plan to accelerate and institutionalize an already active productivity improvement process.

c. Information Technology

Better use of information means more efficient use of DoD resources. Increasing reliance on microcomputers in the work place, significant improvements in computer technology, and reduced hardware costs have vastly expanded the role and uses of information technology throughout DoD.

(1) Microcomputer Initiatives

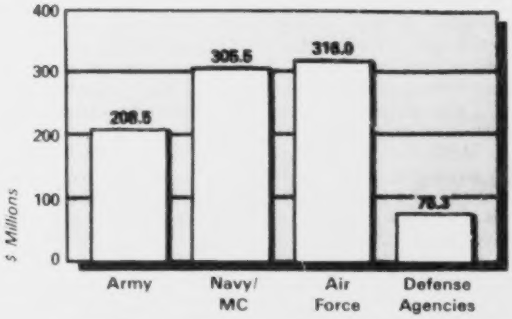
Advancements in microcomputers have made them more attractive and accessible to organizations within DoD. Microcomputers improve decisionmaking and accelerate the performance of administrative tasks. Toward this end, we are educating and training defense managers and employees on computer usage.

Knowledge of how to make the best use of microcomputers is key to increasing employee productivity. In fact, increasing use of microcomputers and office automation systems to support organizational missions has resulted in substantial improvements in products generated services provided, worker efficiency, and unit morale. For example, an office automation pilot program in a Navy research and development laboratory revealed initial productivity gains of 8 to 12 percent, with expected gains of 16 to 25 percent when full implementation is achieved.

(2) Lease Versus Buy Tradeoffs

DoD has implemented programs to acquire ADP resources competitively at the minimum cost. Through a rigorous review, we have identified instances where it would be more economical to buy the equipment rather than continue to lease it. As a result, our budget request for leased ADP systems was reduced by over 40 percent from FY 1984 to FY 1987. By purchasing the equipment, we will avoid additional payments of about $905 million for equipment leases. Chart II.B.5 shows each Services' and the defense agencies' share of the estimated savings.

Chart II.B.5
Net Cost Avoidances in ADP Equipment Leases



d. Financial Management Reforms

Through financial management reforms, DoD has achieved better control and accountability over its resources. Each DoD component is developing a financial management plan to implement an integrated financial management accounting system within five years.

Within DoD, several actions are under way to upgrade our existing accounting systems and subsystems to meet GAO and OMB requirements. New guidelines have been issued for the development, evaluation, and maintenance of accounting systems. As a result, we have achieved a net reduction of five accounting systems that had not previously been in compliance with the prescribed requirements. In addition, DoD is continuing to evaluate financial systems to determine if they can be eliminated or consolidated into fewer, but more encompassing, accounting systems. Finally, DoD developed a uniform chart of general ledger accounts that provides detailed accounting requirements to support budget execution and proprietary accounting necessary to prepare financial reports to the Congress, OMB, and the Treasury.

e. Logistics Management Initiatives

The primary purpose of the logistics community is to support the combat elements so they can accomplish their mission in peace and war. Improvements in our logistics management accountability procedures include:

-- Improved inventory record accuracy. The difference between the actual inventory and the inventory reflected in our automated data base has decreased from 4 percent in FY 1980 to 2.5 percent of the value of the inventory in FY 1985. By improving our accuracy, we avoided $160 million in unnecessary procurements in FY 1985.

-- Defense Reutilization and Marketing System. Materiel valued at more than $6 billion is processed through the DoD Reutilization and Marketing System each year. Approximately $1 billion of this is transferred from organizations that have excess quantities to those requiring these items. These transfers reduce procurement and repair costs. Modernization of our computerized items screening process is expected to increase transfers by $124 million annually.

-- Logistic Applications of Automated Marking and Reading Symbols (LOGMARS). DoD has initiated a defensewide program to use bar codes similar to the coding on all consumer product packaging. We project productivity savings from this program in excess of $100 million annually.

-- Automated memory cards. This program employs advances from the private sector in the packaging of microchips to capture, transport, and make readily available a wide range of logistics data. Ultimately, this program will save labor costs and greatly improve our response time during mobilization.

-- Enhanced use of commercial transportation to move forces and supplies in both peace and war. In an effort to make more efficient use of this relatively untapped resource, DoD is equipping and training its traffic managers to operate economically and efficiently in a highly competitive environment. This includes automating the freight rating, routing, and audit functions to reduce significantly the paperwork that normally amounts to about 40,000 items per day.

-- Commercial travel offices to improve the management of DoD travel. These travel offices enable DoD employees to take advantage of transportation and travel discounts. For instance, we are expanding the GSA-DoD City Pair Program, which provides fares about 40 to 50 percent below standard coach and now covers more than 900 routes with 27 carriers. Overall, we have been able to save $70 million each year in official travel costs by using discount fares.

-- An expanded energy conservation program. Our $1.2 billion expenditure since FY 1976 on conservation projects for existing buildings has resulted in savings in excess of $3.5 billion in defense energy costs, with over $500 million realized in FY 1985 alone.

f. Installations Management Reforms

DoD manages about 1,240 major military installations worldwide. Installations management initiatives have gained the enthusiastic support of military commanders throughout the Armed Services. These initiatives are keyed to the primary objective of ensuring that we have excellent installations to carry out defense missions.

The Model Installations Program (MIP) is an experimental effort to give local commanders and their personnel the opportunity to experiment with new ways of doing their jobs better. Commanders may seek waivers to regulations in order to test new ideas. As an incentive, savings are retained by the installation to improve the quality of life. For example, at Camp Lejuene, a Marine in a transportation squadron noticed that newly purchased vehicles arrived with a complete set of shop manuals costing approximately $70. The suggestion to reduce the number of manuals to the two sets required by the maintenance shops to service the vehicles resulted in an estimated annual savings of $1.3 million.

Contract competitions between private businesses and our own inhouse organizations have generated significant savings each year. At Randolph Air Force Base, a word processing center was contracted out to a civilian company with a savings of $163,000 -- a 51 percent savings over in-house costs. These competitions have cut the cost of operations and have produced significant savings each year.

3. Eliminating Waste, Fraud, and Mismanagement

DoD management efforts have been increasingly successful in detecting and curbing waste, fraud, and mismanagement. Our successes reflect the increased resources and attention being applied to internal management review, audit, inspection, and investigative functions.

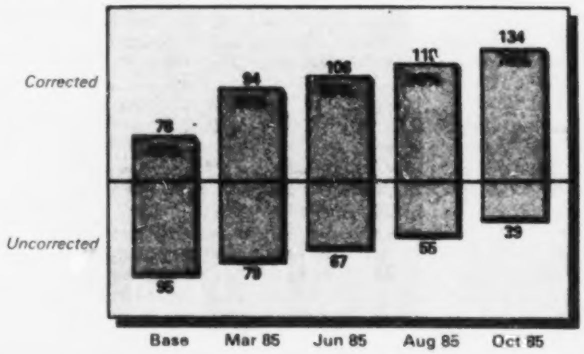
a. Internal Management Control Program

The Internal Management Control (IMC) program encourages managers to scrutinize their organizations and identify and correct weaknesses before they cause problems. Under this program, DoD managers make a formal evaluation of administrative and accounting controls in their operations. When they find weaknesses that could lead to waste, fraud, or mismanagement, they identify the cause and develop strategies for corrective actions.

During FY 1983 and FY 1984, a total of 173 weaknesses were discovered through the IMC program. Of those, 78 were corrected the same year they were discovered. Chart II.B.6 depicts our progress. As of the end of FY 1985, a total of 134 weaknesses (78 percent) had been corrected, while the majority of the remainder will be corrected in FY 1986. Examples of corrections include real property maintenance aircraft flight schedules, and foreign military sales; these corrections alone saved $8.5 million.

In 1985, DoD instituted a more comprehensive process to identify weaknesses. In addition to IMC reviews, all components expanded their efforts to include findings resulting from internal and external audits, and management studies. Consequently, senior management attention and plans for corrective action are being focused on such areas as procurement and property management.

Chart II.B.6
Progress on Correction of Management Weaknesses



b. DoD(IG) Initiatives

The Office of the Inspector General (IG) was established by law and performs, supervises, and coordinates audits, inspections, and investigations of DoD programs and operations.

(1) Audit Operations

The IG performs audits, establishes audit policy, reviews and oversees operations of DoD contract and internal audit organizations, and evaluates the implementation of auditing standards, policies, and procedures. During FY 1985, the IG issued 125 audit reports that identified $1.1 billion in potential monetary benefits. Potential monetary benefits from all other DoD audits/reviews, including Service audit agencies and internal reviews, totalled $1.5 billion.

Audits are performed within the Office of the Secretary of Defense, the Organization of the Joint Chiefs of Staff, the unified commands, the defense agencies, and the military departments. Audit efforts result in significant and continuous improvements in DoD's operations. For example, auditors found that by consolidating two supersonic sled track testing facilities, estimated repair and replacement costs of $51.8 million could be saved, and annual operating costs could be reduced by $1.2 million. Another audit found that contractor progress payment rates established in 1981 are too high under current economic conditions. Cuts in these payment rates should reduce the FY 1985 cash outlay by $1.9 billion and interest costs by about $230 million. In addition, efforts such as the publication of the Handbook on Labor Fraud Indicators, designed to assist contract auditors identify fraud, have enhanced the quality of work performed by DoD audit organizations.

Our aggressive audit follow-up program has led to prompt resolution of disputed findings and completion of corrective actions. This system covers DoD internal audits, General Accounting Office (GAO) reports, Defense Contract Audit Agency (DCAA) reports, IG inspections, fraud prevention surveys, and oversight reviews. Corrective actions have been completed on 62,299 DoD internal and GAO audit recommendations resulting in savings of $2.2 billion for FY 1985. Currently, an additional 18,876 DoD and GAO reports are being tracked with potential savings of over $3 billion.

(2) Criminal Investigations

The IG oversees and establishes policy for DoD criminal investigative organizations. To improve cooperation and increase prosecutions, a special DoD/Justice Department procurement unit was established. We now have ten DoD employees assigned to this unit. To help DoD employees identify procurement fraud, we published Indicators of Fraud in Department of Defense Procurement. This publication, along with 78 seminars presented for federal investigators and other government personnel, greatly expanded the level of fraud awareness within DoD and increased the detection and reporting of fraud activities.

As the criminal investigator for DoD, the IG detects and investigates fraud in DoD programs and organizations. In FY 1985, IG investigative activities resulted in $92.9 million in recoveries and $33 million in fines, penalties, and restitutions. Administrative actions in FY 1985 included 225 suspensions and 357 debarments. The IG has zeroed in on procurement fraud involving major DoD contractors. For example, one investigation revealed that a contractor had falsely certified the testing results of certain microchips purchased by government agencies. The corporation agreed to pay $1.6 million in criminal fines, damages, and civil penalties, and $105,000 for the cost of prosecution.

The DoD Hotline is an avenue for reporting fraud, waste, and mismanagement within the department. Since its inception in 1979, over 37,000 contacts have been processed with over $6 million in savings reported. To illustrate, an inquiry into the replacement costs of parts used in a ship's weapons control console showed that one part had a "should cost" value of $1,700, which was $8,400 less than the price reflected in the military pricing list. As a result DoD should realize a savings of over $100,000 in the procurement of these parts.

(3) Inspection Activities

The IG conducts general inspections of DoD agencies worldwide. During FY 1985, ten organization-wide inspections at 308 locations were completed. On one inspection, inspectors found that the Department of Defense Dependent Schools was shipping employee baggage by military channels rather than postal channels. Changes in regulations were introduced requiring the least expensive method of baggage shipment, thereby resulting in a potential annual cost-avoidance of $400,000.

c. Defense Contract Audit Agency

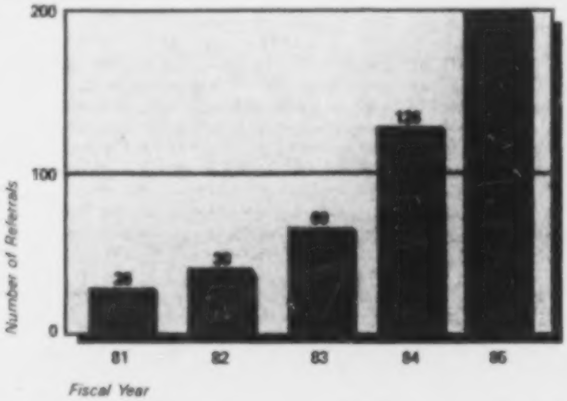
DoD's worldwide contract audit activities are conducted by the Defense Contract Audit Agency (DCAA). DCAA's mission is to perform all necessary contract audits for DoD and to provide accounting and financial advisory services on contracts and subcontracts. DCAA audit services result in over 60,000 audit reports annually. These audits have produced an estimated savings of $10 billion over the past two years.

(1) Suspected Fraud Cases Reported by DCAA

Improved fraud detection training for auditors has turned out to be a worthwhile investment. From FY 1981 through FY 1985, 450 suspected contractor fraud cases were referred for investigation. As shown on Chart II.B.7, there were 199 referrals in FY 1985 alone. One recent referral has resulted in a proposed settlement, including fines and restitution, of $1.9 million. The contractor had fraudulently transferred labor costs resulting in an overcharge to the government. Two contractor employees were charged with 108 counts of making false claims and statements.

Chart II.B.7

Defense Contract Audit Agency
Referrals for Investigation



(2) Cost Savings Realized from DCAA Audits

DCAA audits have resulted in significant savings. For example, one review of a contractor's $34.7 million claim resulted in government savings of $23.6 million. The contractor claimed the additional costs resulted from defective specifications, excessive changes, failure to disclose important information, and lack of cooperation. DCAA auditors demonstrated, however, that many points in the contractor's claim were either unsubstantiated or the result of poor contract planning.

In another instance, DCAA work sampling disclosed that inadequate supervisory controls permitted engineering nonproductivity averaging 30 percent of total labor. The contractor agreed and immediately implemented audit recommendations that will achieve significant productivity improvements and will result in annual government savings of $24.2 million.

4. External Management Initiatives

DoD welcomes ideas and suggestions from outside sources that enhance the department's ability to meet the nation's security needs in an efficient, cost-effective, and business-like manner.

a. Grace Commission Recommendations

The President's Private Sector Survey on Cost Control (Grace Commission) addressed a number of subjects pertaining to DoD. We have already implemented many of the commission's management initiatives to include multiyear procurement, economic production rates, and enhanced competition.

Our FY 1984 and prior budgets contain savings of $3.4 billion resulting from the implementation of several Grace Commission initiatives. During FY 1985, the savings amounted to $5.5 billion, and we project savings of $5.8 billion for FY 1986. We are continuing to pursue implementation of the remaining Grace Commission recommendations and, where opportunities exist for further savings, we will take advantage of them.

b. Blue Ribbon Commission on Defense Management

In June 1985, President Reagan established a Blue Ribbon Commission on Defense Management. The commission is reviewing the progress already made in improving DoD's management, organization, acquisition, and decisionmaking procedures.

In addition, on October 16, 1985, the Senate Armed Services Committee (SASC) staff published the report, Defense Organization: The Need For Change. The report recommends far-reaching organizational modifications to DoD. The SASC recommendations are being studied for possible action and will be addressed in conjunction with DoD's response to the findings of the Packard Commission.

c. Reform '88

Reform '88 is a comprehensive program to improve, consolidate, and streamline the management systems of the federal government. Toward this end, DoD is implementing a broad range of initiatives in cash management, debt collection, administrative systems, and management reviews.

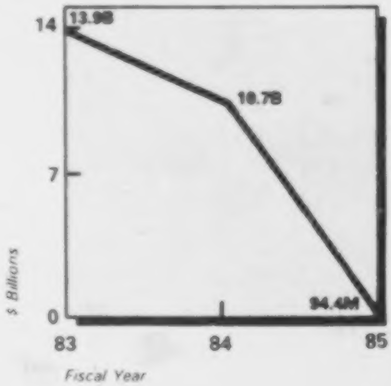
Cash management improvements have accounted for $225 million in savings through FY 1985. We project an additional $160.5 million in savings for FY 1986. These savings have been realized through a reduction in the amount of early and late payments made within DoD. Interest on late payments decreased from $4.1 million in FY 1984 to $3.6 million in FY 1985, a 12 percent reduction. Also, during FY 1985, our early payments decreased by $10.6 billion, from $10.7 billion in FY 1984 to $94.4 million, a 99 percent reduction. Chart II.B.8 shows this dramatic improvement in reducing early payments since FY 1983.

Additionally, DoD has reduced debts owed the government by using credit reporting bureaus, collection agencies, salary offsets, and assistance to other federal agencies in collecting debts. We have assisted the Department of Education in collecting more than $15 million in delinquent student loans from DoD employees, and collected over $378,000 in debts with the use of commercial collection agencies.

We have consolidated and standardized administrative systems. For instance, we reduced the number of civilian personnel and payroll systems from 36 in 1983 to 29 today.

Chart II.B.8

Early Payments



Also, DoD participates in the OMB Management Review Program providing information on the development and implementation of management initiatives. In total, more than 30 management improvement actions were completed and provided to OMB as part of the FY 1986 review. The plan for FY 1987 has identified 105 actions to be taken and provided to OMB during this planning cycle.

5. Conclusion

During the past four years, we have identified management problems within DoD and initiated reforms to eliminate these problems. Of course our job is far from done. We will continue to uncover problems, even as we continue to evaluate and, when necessary, revise our management reforms. Comprehensive programs to improve acquisition management; to end spare parts pricing abuses; and to curb waste, fraud, and abuse are in place -- and they are working.

Our challenge in the coming years will not be just to solve problems, but to prevent them. As we develop new weapons systems, we must plan at the outset for competition, for efficient production, and for adequate support and readiness. We must write tough contracts and enforce them strictly. And we must examine our operations to see not just where waste or fraud is occurring, but where it could occur -- and then see to it that the taxpayers' dollars are not squandered.

C. READINESS AND SUSTAINABILITY

1. Introduction

Readiness and sustainability are two of four essential components of military capability -- the other two being modernization and force structure modifications. While DoD has witnessed major improvements in all four areas during the past five years, this section of the *Annual Report* focuses on our progress in force readiness and sustainability. During the first four years of this Administration, we made substantial investments in both manpower and materiel to bring our readiness and sustainability up to an acceptable level. Modernization has also contributed to our readiness and sustainability posture through reliability and maintainability improvements. However, as we make headway in modernization and force structure increases, we are likewise experiencing increases in the net resources required to maintain our modernized and improved force levels at a high state of readiness.

Now, in an era of tightened fiscal resources, we must consolidate and hold our improved readiness posture, while continuing to improve our sustainability. Fiscal constraints, however, mean that future progress will be more gradual. As resources permit, we will continue to make improvements in a balanced way.

This chapter discusses several specific readiness and sustainability improvements, assesses our current posture, and identifies expectations for the future. Those manpower, installations, and other mobilization programs that contribute to readiness and sustainability are discussed in greater detail in other chapters of this report.

Much has been written about our military readiness and the extent to which it has improved. The airing of this issue has accomplished at least one purpose -- it has shown that the military capabilities of the United States are not easily captured by quantitative indices. A report, *Improvement in U.S. Warfighting Capability FY 1981-1985*, released last year, demonstrates several ways in which our military capability has grown in the last five years. In addition, we have begun work on developing quantitative indices of military capability that we hope will reliably represent changes over time.

2. Readiness

Our objective is to provide qualified personnel and capable equipment to our forces, and to provide training opportunities so that full combat potential can be achieved within tasked response times should a conflict arise. We evaluate four separate factors in assessing the readiness of our forces:

-- ***Equipment Fill:*** The amount of equipment (i.e., aircraft, tanks, trucks, etc.) we field relative to our combat requirement;

-- ***Equipment Condition:*** The ability of fielded equipment to perform its mission;

-- ***Personnel Fill:*** The availability of people with the right skills and training to man our force structure; and

-- ***Unit Training:*** How well our individual units are collectively trained.

These readiness components require various resources that have different procurement lead-times as depicted in Table II.C.1.

Table II.C.1
Readiness Components and Procurement Lead-Times

Component	Lead-Time (Years)
Equipment Fill (PA)	2-3
Equipment Availability	
– Depot Maintenance (O&M)	1
– Repair Parts (PA, SF)	1-3
Unit Training	
– Flying/Steaming Hours and Battalion Training Days (O&M)	1
– Simulators (PA)	2-3
Personnel	
– Recruiting and Retention (O&M, MP)	1

PA – Procurement Accounts Investments
O&M – Operations and Maintenance Account Expense
SF – Stock Funds Investment
MP – Military Pay

It is important to note that very little improvement to readiness can be achieved on short notice. Some important readiness areas have lead-times as long as our modernization programs. In fact, production lead-time is often much greater than the strategic warning we are likely to get. For this reason, we continue to give readiness a high funding priority in that we will not have time to "get ready" upon warning of the likelihood of a conflict. Our achieved readiness in peacetime will largely determine the effectiveness of our conventional forces in the first days of combat.

a. Equipment Fill

Navy and Air Force equipment-fill status remains adequate or has improved since last year's report. The Marine Corps and the Army have also improved their equipment fill status; however, the Army continues to experience readiness problems due to shortages in unit equipment. Although substantial amounts of modernized and new equipment have been fielded, the Army has not been able to overcome long standing equipment shortages or replace overaged or obsolete equipment.

Army fiscal resources have been inadequate to complete essential modernization and the procurement of support equipment. Given further reductions in fiscal resources compared to previously planned levels, the prospect of procuring the equipment the Army needs in the near future is dim. Therefore, we are concentrating on identifying the most urgently needed items for near-term procurement. Toward that end, the Army is refining the data systems it uses to track equipment inventories.

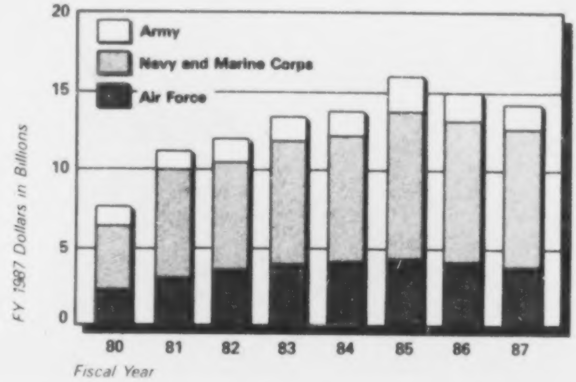
b. Equipment Condition

The operational availability of our fielded equipment is a function of how often it breaks (its reliability), how long it takes to fix it (its maintainability), the supply of repair parts and other components, and the availability of trained maintenance personnel to keep this equipment in combat-ready condition. We have made considerable progress in all of these areas.

(1) Depot and Field-Level Maintenance

The overhaul and field-level maintenance of ships, aircraft, tanks, missiles, and other major weapons systems are central to the equipment maintenance strategy of each Service. While the budget maintains the progress we have made in our maintenance posture, we have had to scale back our objectives somewhat because of fiscal constraints (see Chart II.C.1).

Chart II.C.1
Depot Maintenance Funding



However, we will continue to place strong emphasis on funding for depot and field-level maintenance while taking full advantage of benefits associated with such DoD initiatives as maintenance research and development, major weapons systems support evaluations, and reliability-centered maintenance. These initiatives impact on maintenance costs, availability, and readiness early on in the weapons systems' developmental stages.

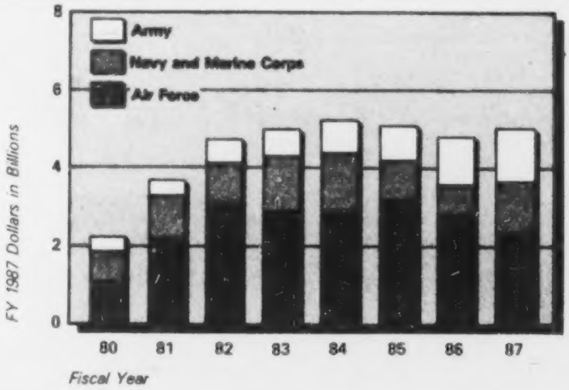
(2) Spares and Repair Parts

The effectiveness of both depot and field-level maintenance programs depends on the availability of spares and repair parts. We require both replenishment spares -- to replace those consumed by operational systems -- and initial spares -- to support new weapons systems entering the inventory. Replenishment spares requirements are driven largely by peacetime activity levels (aircraft flying hours, for example); initial spares requirements are a function of our modernization programs.

As shown in Chart II.C.2, we substantially increased and are maintaining our annual investment in replenishment spares to support our peacetime activity levels and improve the operational availability of our ships, aircraft, and combat vehicles. In addition, we have fully funded the requirement for initial spares each year to keep support abreast of new equipment deliveries and to ensure that our newest and most effective equipment is fully supported. We will also invest an additional $7 billion in initial repair parts purchased through the

Defense Stock Funds (DSF) between FY 1983 and FY 1987. As a result, the new weapons systems procured through our modernization programs are better supported at delivery than were their predecessors.

Chart II.C.2
Peacetime Replenishment Spares Funding

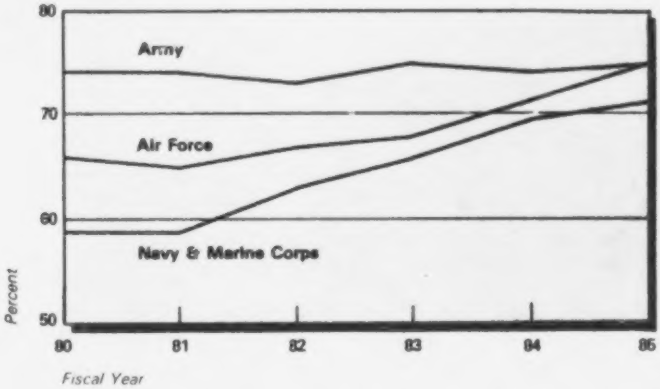


For some time DoD has recognized that greater efficiency could be achieved by sizing spares and repair parts inventories to specific weapon system availability objectives. This concept, known as "sparing to availability," is difficult to accomplish because of the complexity of modern weapon systems. However, under the auspices of the Supply Management Policy Group, a conceptual plan to achieve sparing to availability was formulated and subsequently implemented. This will be a long-term effort. The payoff, however, is potentially very large; we expect, given constant costs, to achieve higher weapons systems availability and to increase readiness. Additionally, should reduced funding levels be necessary in the future, we would be able to identify where best to take reductions to keep readiness at the highest level possible.

(3) Equipment Availability Results

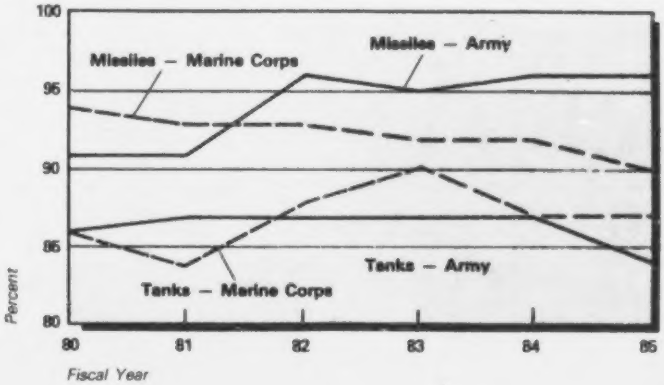
Our increased attention to equipment maintenance and spares and repair parts support is largely responsible for the measured improvement in equipment availability. Our primary measures of forcewide equipment availability include mission capable (MC) and fully mission capable (FMC) rates for aircraft and ground forces equipment, and substantially ready (SR), and marginally ready (MR) rates for ships. These measures describe the percent of weapons systems in the inventory that are capable of performing at least one assigned mission (MC) or all assigned missions (FMC). We have experienced positive trends in aircraft availability as illustrated in Chart II.C.3. Chart II.C.4 shows that FMC rates for Army and Marine Corps tanks have declined since FY 1983 due to maintenance problems with the older M48A5 and M60 tanks. For the more modern M60A3 and M1 tanks, the FMC rates were 91 and 89 percent respectively for FY 1985. For ships not in overhaul, the percent rated substantially ready in equipment readiness has increased from 54 to 89 percent between FY 1980 and FY 1985.

Chart II.C.3
Aircraft Mission Capable Rates



We expect these trends to continue as our expanded investments in spares and repair parts are fully delivered. The FY 1987 Materiel Readiness Report provides detailed historical and projected equipment readiness rates by specific weapon system and Service.

Chart II.C.4
Selected Ground Forces Equipment—FMC Rates



c. Personnel Fill

While great strides have been made in terms of manpower availability over the past several years, a resource gap is developing. Manning to fill valid programmed manpower force structure requirements is being constrained through reductions in the Active Component end strength request. Unless this trend is reversed, personnel fill readiness is and will continue to be diminished proportionately.

d. Training Readiness

In addition to adequate inventories of well-maintained equipment, our forces must be systematically trained and exercised as units to develop the collective skills required for success in wartime missions. The amount and quality of collective unit training define the training component of force readiness.

The ability to conduct good collective unit training depends on personnel and materiel readiness. The favorable trends described in the Manning the Force Chapter of this report -- high-quality enlistees, good retention of noncommissioned officers, improvements in personnel stability -- allow units to concentrate on perfecting collective skills. Improved availability of operational equipment also increases the opportunity for sound collective unit training.

The Army has increased substantially the number of battalions using the National Training Center -- perhaps the best facility in the world, short of combat itself, for training ground forces realistically. From FY 1982 to FY 1985, the number of battalions using this facility annually has increased from 16 to 28, a level that will be maintained in FY 1986.

Improving the training of Army Reserve Component forces has been a priority goal of this Administration. Toward that end, the Army increased the overseas deployment training of reservists from 4,200 in FY 1981 to 25,000 in FY 1985.

The Marine Corps has increased battalion field training days 16 percent from FY 1982 to FY 1985, while major field exercises have increased 24 percent.

In FY 1985, the Air Force trained 93 percent more tactical aircrews than it did in FY 1981, while tactical Air Force flying hours increased 13 percent from FY 1981 to FY 1984. The Navy also has increased both trained pilots and flying hours.

We have also improved training readiness by increasing the value of training time -- for example, the development and use of more effective training ranges and the increased development, procurement, and use of simulators and other training devices. These devices complement and supplement training on the primary equipment and raise proficiency beyond that which could be achieved in the past using primary equipment alone.

3. Sustainability

Our sustainability objective is to ensure logistics support to our conventional forces from the initiation of a conflict to its successful termination. Our requirements for combat-essential materiel during a conflict will be many times larger than our normal peacetime consumption. Thus, we strive to build up war reserve stocks sufficient to support the combat forces until the industrial base can mobilize to meet our wartime requirements. Unfortunately, long production lead-times and the large quantities required make building stockpiles of war reserve munitions, equipment, and spares and repair parts a slow and expensive process.

Sustainability, like readiness, cannot be purchased quickly. Although the sustainability resource areas were allocated some of the largest real funding increases over the last five years, a little more than half of this investment has been produced and delivered. We recognize sustainability funding as a high priority, and we need continued congressional support to achieve these important objectives. The following section addresses the war reserve component of our sustainability support policies.

a. Munitions

We have continued the progress reported last year toward redressing critical deficiencies in munitions sustainability. Funding for the last eight budget years is shown in Chart II.C.5. This graph demonstrates our resolve to build our munitions inventories to the point that we would never be forced to escalate to theater nuclear weapons because our conventional sustainability had been exhausted. Even with these increases, however, achieving our modest mid-term objective has been painfully slow. The long production lead-time for munitions, about two years, means that the increased funding in FY 1982 through FY 1983 is only now being translated into increased combat staying power.

Chart II.C.5
Munitions Sustainability Funding

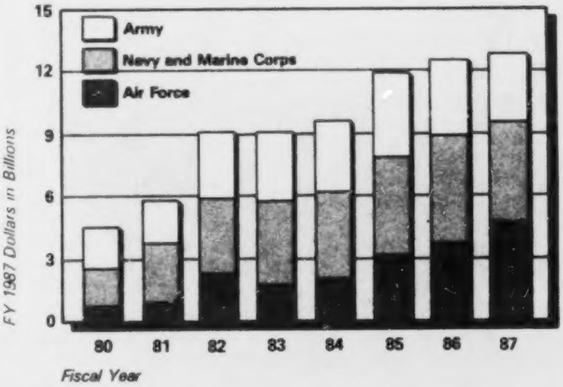
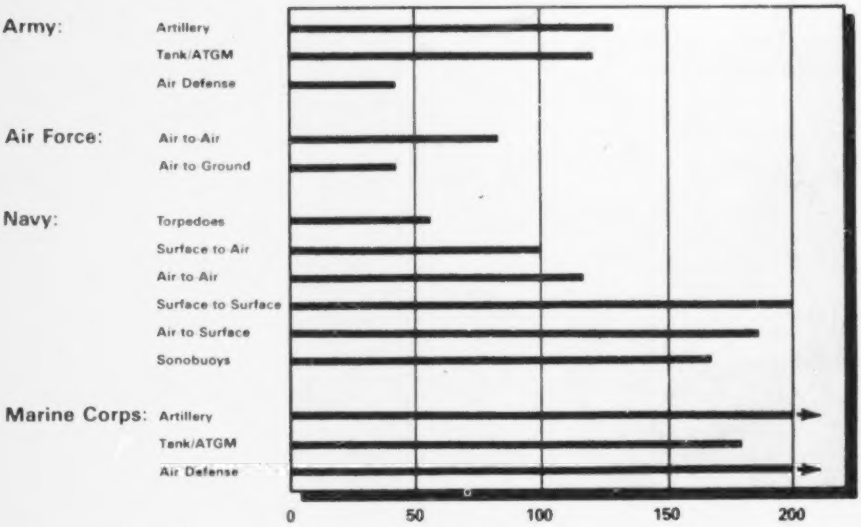


Chart II.C.6 reflects the increase in sustainability for major munitions items from FY 1981 to the end of the FY 1987 funded delivery period (FY 1989), if the amounts requested in the FY 1987 budget are approved. All Services show substantial improvement, with the Navy making the greatest strides. The rate of improvement in Army sustainability has slowed because recent fiscal constraints have resulted in a leveling off of Army munitions funding.

Chart II.C.6

Progress in Improving Sustainability in Munitions



% Improvements Over FY 81 Posture (Assets, End FY 1981 Funded Delivery Period versus End FY 1987 Funded Delivery Period)

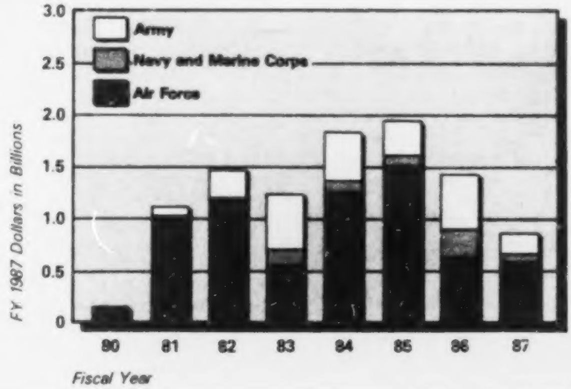
Procurement of modern munitions increases sustainability and achieves modernization as well. When we buy Maverick missiles, for example, we not only arm a number of sorties, we also greatly increase the potential effectiveness of those sorties. Similarly, the Copperhead offers an increase in capability that cannot be matched by older artillery rounds. The thrust of our munitions procurements is to get us through the intense early days of a conflict in good enough shape continue the conventional battle.

The exact level of our sustainability -- how many days or weeks that we could fight -- is scenario-dependent, and our estimate for specific scenarios is classified. In general terms, we have not attained the levels necessary to constitute a prudent-risk deterrent. On the one hand, sustaining a conventional war is very expensive. It will take many years to build our stockpiles to the required level. On the other, we think it is worth the expense to provide the conventional sustainability necessary to establish a credible deterrent and to reduce the risk of nuclear escalation.

b. Spares and Repair Parts

Our increased consumption of spares and repair parts to keep aircraft, ships, and other combat equipment fully operational at the much higher level at which they will be operated during a conflict is the basis for our war reserve requirement for these items. We have concentrated on filling the necessary stockpiles of prepositioned spares and repair parts -- those that would be required first. To accomplish this, we have continued our funding for war reserve spares and repair parts in the procurement accounts; however, tight or fiscal constraints in the past two years have resulted in decreases from the FY 1985 levels (see Chart II.C.7).

Chart II.C.7
War Reserve Spares and Repair Parts Funding



Because of the production lead-times for these items, only about half of our investment over the last four years has been delivered. Today, we have only about one-third of our war reserve prepositioning objective on hand, but we expect that the increased sustainability funding already approved, as well as that planned, will allow us to achieve more than 80 percent of that objective by the end of this decade.

The payoffs from this funding are substantial. Perhaps the most impressive is in airlift, where additional spares procurement alone has provided a 73 percent increase in deliverable tonnage from FY 1981 to FY 1985. Additional capacity growth has been achieved through acquisition of new aircraft and modification of existing aircraft.) Army aviation war reserve spares inventories in FY 1985 increased 180 percent since FY 1981, and the number of Navy aircraft carriers with adequate levels of aviation spares has increased by over 100 percent. The Air Force reports that increased spares procurement has resulted in an 83 percent increase in wartime spares supportability for sorties from FY 1981 to FY 1985.

4. The Industrial Base

a. Objectives

The war reserves of materiel we stockpile in peacetime would only sustain our forces in combat for a relatively short period. To be prepared for the possibility of long-term combat, the United States needs a strong industrial base to produce the materiel that would be needed after our stockpiles are used up. For this reason, it is essential that we maintain an efficient and responsive production base to support peacetime procurement. Thus, in both peace and war, DoD relies upon a strong industrial base to produce the materiel needed by our combat forces for the protection of the nation.

There is a direct relationship between the health of the private industrial base and the ability of industry to respond to our needs for materiel. Past studies have been critical of the state of the industrial base as being outdated and not capable of surging production. The domestic industrial base is primarily privately owned. Therefore, the commitment of private investment capital for equipment, facilities, and process modernization is essential if we are to have a strong base that can respond to defense requirements.

Emphasis on defense contractor productivity and quality improvements are integral to DoD efforts to reduce acquisition costs. Productivity improvements are best achieved by stressing quality. Accordingly, we have formulated a ten-point program called the "DoD/Defense Industries Quality Excellence Program." This and other major industrial base programs, such as manufacturing technology, earthquake preparedness, and measures for establishing domestic capacities to support industrial readiness are discussed below.

b. The Defense Production Act

The Defense Production Act of 1950 (see Chart II.C.8) is the legislative authority for building our industrial capability and for keeping defense programs on schedule and within costs. Our production programs of B-1 bombers, TRIDENT submarines, and Peacekeeper missiles all rely on the Defense Production Act to maintain manufacturing schedules, and to reduce lead-times and costs, and foreign-source vulnerability.

Chart II.C.8
Defense Production Act of 1950

Title I	Authorizes Allocation of Resources to Prevent Disruption of Production
Title III	Provides for Expansion of Industrial Capacity to Meet National Security Needs
Title VII	Establishes Advisory Committees to Allocate Production During Wartime

c. Stockpiling of Strategic and Critical Materials

The purpose of the stockpile program is to ensure a supply of critical raw materials including those needed for high-technology items to support the military, industrial, and civilian needs of the United States during an emergency. The Emergency Mobilization Preparedness Board (EMPB) working group on industrial mobilization has recently completed a study reviewing the process by which the national stockpile goals are set. New goals have been established by the President as a result of the study, and we look to modernizing stockpile assets to meet the needs of new and emerging technologies.

d. Manufacturing Technology Program

The manufacturing technology program seeks to improve the productivity and responsiveness of the defense industrial base by investing in advanced production technologies. One recent accomplishment is a photogrammetric technique for verifying aircraft assembly tool alignment that eliminates the labor-intensive use of master gauges. Savings to date are $4.2 million with expected savings of an additional $27 million. Another accomplishment is the development of an improved process for fabricating thermal sights. This process has saved $19 million to date with an additional $11 million savings projected. Return on investment can average 3-to-1 or more.

As recommended by the President's Commission on Industrial Competitiveness, we have established a Manufacturing Technology Information Analysis Center (MTIAC) to infuse program results more rapidly into the industrial base and to establish a focal point for manufacturing technology for DoD and its contractors. Currently, the MTIAC is preparing four technology assessments: high order languages for industrial robots; artificial intelligence and expert systems applications in manufacturing; evaluation of finite capacity scheduling and simulation systems; and automated inspection for flexible machining systems.

e. DoD Industrial Capabilities Information Management System

To assess the capabilities of the industrial base, we are building a multi-Service automated data base to help evaluate the responsiveness of critical sectors of U.S. industry starting with ammunition, precision guided munitions, and the gas turbine engine. The data base will be limited strictly to internal DoD use because of the sensitive information it will contain. This system will allow us to fulfill our industrial base mission more effectively.

f. Earthquake Preparedness Planning

Based on geologic evidence, the probability of a catastrophic earthquake in California is greater than 50 percent in the next 30 years. Such an occurrence could not only have a severe impact on the local industrial base, but also a major impact on the security of our nation. About 56 percent of the precision guided munitions and space vehicles, 40 percent of the semiconductors, 25 percent of the electronic computer equipment, and 21 percent of the optical devices manufactured in the nation are produced in the 21 California counties at risk. Currently, California has over 30 billion dollars in DoD prime contract awards, plus a multitude of subcontractor and supply vendor contracts. In many cases, California firms are the only source for some of our most critical defense systems. In addition, more military installations are located in California than in any other state.

In the past, the State of California and the federal government have emphasized development of immediate emergency (life saving and support structure) response plans. Because of the potential direct impact on our defense industrial base and national security posture, we are also emphasizing industrial recovery planning.

g. Industrial Responsiveness

We are increasing our dialogue with the private sector on expanding the ability of the industrial base to support our forces during mobilization. An industrial responsiveness analysis was conducted in conjunction with the JCS mobilization exercise PORT CALL 86. Responding to a hypothetical crisis scenario, 24 defense contractors who manufacture some 40 critical items provided data on the quantities they could produce in 18 months. This exercise has identified both the bottlenecks manufacturers are most likely to experience and constraints that currently limit industry's ability to accelerate production.

h. Emergency Procurement Budget

We are developing an emergency procurement budget that will focus on the critical components, consumables, and other items of materiel needed to sustain the force in the initial months of an extended conflict. The emergency procurement budget would save us substantial time in a national security emergency by providing a baseline from which a budget adjustment or a request for a supplemental appropriation could be tailored to meet the specifics of the crisis at hand. Ultimately, this budget will assist in better formulating our peacetime procurement and stockpiling policies and programs.

i. Industrial Productivity

We are seeking new ways to overcome obstacles in the acquisition process. Competition is too frequently based only on price. Quality, and the risks of poor quality or bad schedule performance, are equally important factors in our acquisition decisions. DoD will continue to act as a tough customer when quality problems are uncovered. The elements of our ten-point program to improve productivity and quality are shown in Chart II.C.9.

New ways will be found to consider quality history in the source selection process and to reward high quality performance. We intend to move away from defining equipment requirements in minimally acceptable terms to a system whereby the best quality equipment at an acceptable price is our recognized objective.

The DoD acquisition streamlining initiative aims to reduce excessive contract requirements that unnecessarily raise the cost of weapons systems. This initiative gives industry a greater opportunity to recommend the most cost-effective specifications, standards, and other contract requirements as weapons systems evolve from concept design through development to fielding. Thirty-three current major acquisition programs have been designated to implement streamlining. Streamlining will apply to all new DoD system acquisition programs initiated after September 30, 1985.

The Industrial Modernization Incentives Program (IMIP) encourages capital investment and the use of the latest technology in the production of defense materiel by providing incentives to contractors to invest their own funds in productivity enhancing capital investments. Currently we are working with over 100 contractors in the program;

long-term acquisition savings are estimated to be in the billions of dollars.

Chart II.C.9

DoD/Defense Industries Quality Excellence Program

Initiative		Focus
Design/Build Quality In	–	Improve the Technical Discipline of Engineering/Manufacturing
Award Contracts Based on Quality Excellence	–	Use Competition to Foster Quality Improvement
Streamlining	–	Focus on High Priority Contract Requirements -- Eliminate Unnecessary Requirements that Add to Waste
Modernize Factories	–	Improve Process Control and Automatic Inspection
Provide Incentives To Motivate Employees To Reduce Scrap/Rework/Repair	–	Investigate Use of Gainsharing in Defense Industry to Reduce Direct and Overhead Costs
Increase and Improve Training/Communication in the Quality Discipline	–	Assist Academe and Industry in Development of Quality Improvement Programs
Implement Guarantees	–	Guarantee Design and Manufacturing to Specified Performance Requirements -- Guarantee Free From Defects in Materiel and Workmanship
Minimize Use of Specification/Source Control Drawings	–	Eliminate Unnecessary Testing Requirements by Using Standard Parts
Improve OEM Discipline Over Subcontractor/Vendors	–	Reemphasize Prime Contractors Audit and Surveillance Over Subcontractors or Vendors
Tighten Quality Surveillance and Investigate Fraud and Abuse, When Indicated	–	Ensure Contract Compliance

j. Industrial Base Program (IBP)

The objectives of the IBP are to improve production efficiencies, establish production and repair surge capabilities, enhance wartime sustainability, and improve industrial preparedness planning. Nine production surge projects were submitted in the FY 1986 defense budget and seven projects were authorized by the Congress. These projects provide for rapid and cost-effective increases in production quantities during emergencies. Critical surge projects in FY 1986 include TOW 2 missiles, two sonobuoys, combined effects munitions, traveling wave tubes, squibs for chaff/flare, and landing gear repair. Nineteen high-priority candidates were reviewed for the FY 1987 surge program, and after detailed cost-payoff analyses, ten of the most promising surge projects have been proposed for the FY 1987 budget. We completed the first phase of a joint industrial base study of the entire family of precision guided munitions. Currently, seven high-priority projects are viable candidates for the $59 million requested in the FY 1986 budget and authorized by the Congress in FY 1985. Investment in both the manufacturing technology and the industrial modernization incentives programs capitalizes on the strengths of the U.S. industrial base -- technological and engineering excellence.

5. Conclusion

Without question, we have made substantial improvements in both the readiness and sustainability posture of our forces since 1980. With regard to readiness, we are confident that we have achieved a level that has substantially enhanced our ability to deter aggression and, if necessary, to react effectively should deterrence fail. This improvement is substantiated by readiness indicators. We have more and better equipment. Our equipment is more operationally available; we have more and better people to operate it, and they are better trained, individually and collectively.

In spite of this substantial progress, much still remains to be done. Thus, we will continue to improve our equipment availability by controlling depot maintenance backlogs for both end-items and components and by giving high priority to funding requirements for both initial and replenishment spares. In addition, we plan to continue funding for collective unit training at the current level for the Navy and Air Force, and at an increased level for the Army flying hour program.

Although we have made great progress, we are still not satisfied with the sustainability of our conventional forces. This is due in part to the longer lead-times required to procure modern munitions, spares, and repair parts, and in part to the major sustainability deficiencies that existed five years ago. Our sustainability requirements have also necessarily increased both to support our modernized weapons systems and to meet the larger threat we must deter and, if necessary, defeat. We will not reach a point of confidence in our sustainability posture until late in this decade, and even that achievement is contingent on continuing an adequate level of overall funding for the defense program. As a result of these investments, each year our conventional sustainability posture improves and reduces the probability of having to use nuclear alternatives should deterrence fail. This is not an investment area in which we can afford to be frugal.

Part III
Defense Programs

A. MANNING THE FORCE

1. Introduction

The most vital element of our improved force structure is manpower. Without sufficient numbers of qualified, motivated, trained people to operate and maintain today's weapons systems and to keep them supplied with munitions, fuel, and spare parts, the significance of the improvements made in force structure and modernization would be greatly diminished.

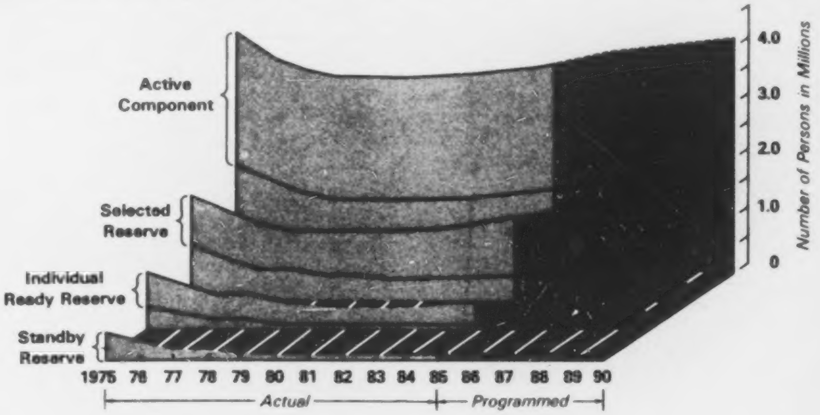
When the Reagan Administration came into office, there were serious manpower deficiencies in both the Active and Reserve Components. Entrance test scores and educational levels had reached alarming lows, unit and individual morale had declined, and we had serious shortages in the career force. Remedying this situation became one of this Administration's highest priorities. As a result, our manpower program today is an unprecedented success. We have overcome the serious personnel deficiencies that undermined our ability to meet our defense commitments. We now have a strong, high-quality force that not only provides for our immediate defense but also serves as a solid foundation for our future defense needs.

2. The Manpower Program

Our manpower requirements are derived directly from our force structure, which is developed to respond to the diverse threats to our national security. Consistent with our force structure requirements and in view of our perception of the threat, we traditionally maintain the minimum active force necessary to meet our immediate requirements, while relying increasingly on our Reserve Component

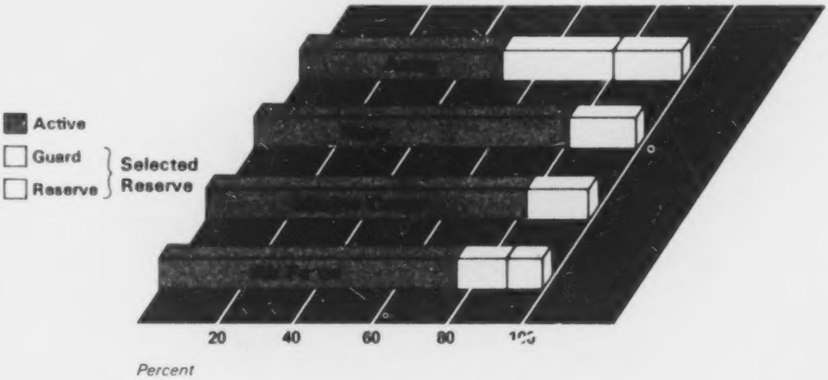
Chart III.A.1

Composition of Total Military Force, 1975-90



forces and civilian manpower to support and augment the active forces. Toward that end, we have developed rigorous processes to measure, review, and validate our requirements for each category of the defense work force. The following section and the Defense Manpower Requirements Report discuss these programs in more detail.

Chart III.A.2
Partners in the Military Force
(FY 1985)



a. Active Component Military Manpower

The growth in capability of our Active Component has permitted development of a credible and formidable military force more capable of meeting its commitment to support our security program.

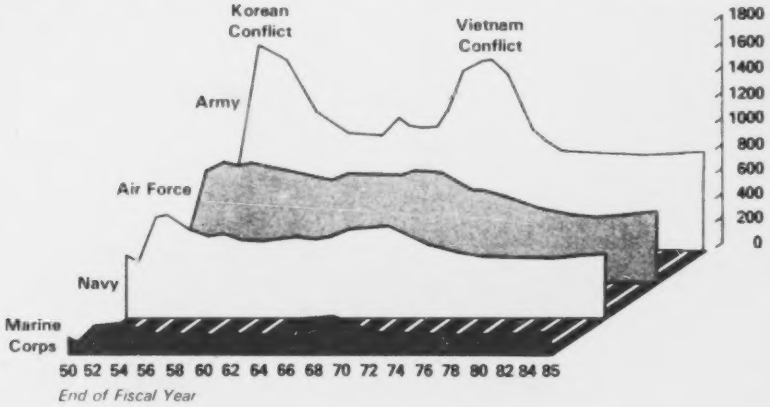
The continued record-high quality of new recruits provides us a solid foundation from which we can staff our force and draw our future leaders. Existing supervisory and leadership shortages are gradually being eliminated, providing us with a more appropriately graded force possessing the necessary skills and experience to win on today's battlefield.

Our progress in quality of life programs is reflected in the improved morale of our force and the decline in disciplinary actions during the past year. We have a force that is prepared and able to support our worldwide commitments. We now must focus on sustaining our manpower successes of the past five years.

(1) End Strength

From FY 1980 to FY 1987, Active Component end strength will increase seven percent to 2,181,100. This includes a growth of 13,730 from the authorized FY 1986 levels. Of this 0.6 percent strength increase, over 10,000 are required to operate and maintain Navy ships and airplanes added to the fleet. The balance of the increased manpower requirements will be devoted to filling out existing units and fielding new weapons systems.

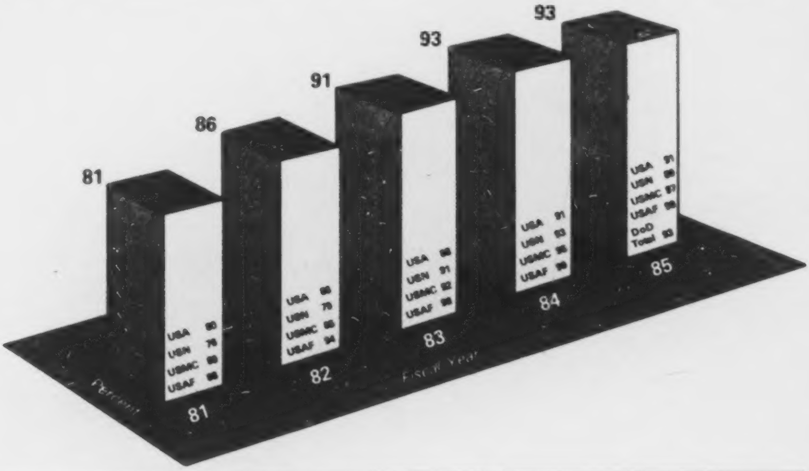
Chart III.A.3
Active Component Personnel Strength Levels
(Thousands)



(2) Recruiting

Alarmed by the poor state of recruiting and retention in FY 1980, this Administration introduced a comprehensive program to improve the Services' ability to attract and retain quality people. Included were programs designed to restore military pay and benefits to competitive levels, provide the Services with adequate recruiting

Chart III.A.4
High School Diploma Graduates
(% Total Active Duty Non-Prior Service Accessions)



resources, and improve the quality of life for military members and their families. The results have been extremely encouraging. The quality of our recruits as measured by educational attainment (high school graduation) and scores on the enlistment test has improved substantially. By FY 1984, recruit quality had reached record-high levels and was significantly greater than the average of the eligible youth population. Charts III.A.4 and III.A.5 show how recruit quality improved during this period.

Chart III.A.5
Aptitude Level of Recruits
(Percent Scoring Average and Above)

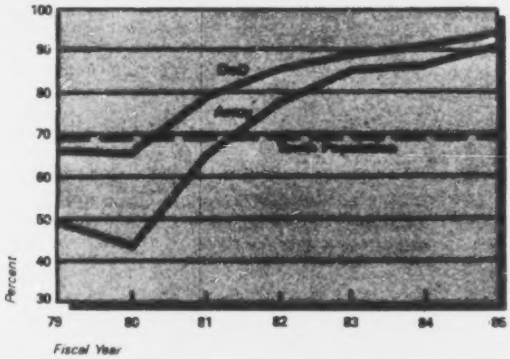
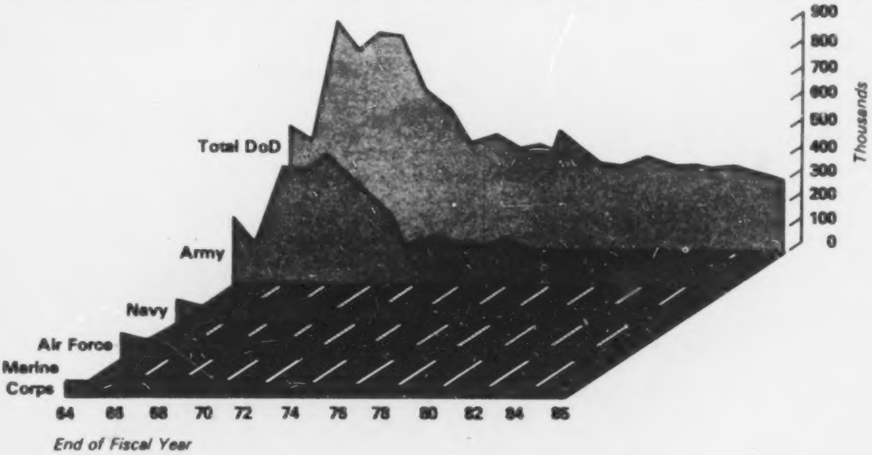


Chart III.A.6
Non-Prior Service Enlisted Accessions Over the Years



Our success in recruiting high quality young men and women continued through FY 1985. All four Services met or exceeded their enlistment objectives. Table III.A.1 shows actual enlisted accessions for FY 1985 and planned recruiting levels through FY 1987.

Table III.A.1
Enlisted Active Duty Accessions[a]
(Numbers in Thousands)

	Actual		Planned	
	FY 1985 Objective	**Percent Achieved**	**FY 1986 Objective**	**FY 1987 Objective**
Army	125.3	100	136.2	137.7
Navy	87.6	100	94.8	98.9
Marine Corps	36.5	100	33.1	33.7
Air Force	67.0	100	67.5	71.4
Total	**316.4**	**100**	**331.6**	**341.7**

[a] Includes prior service and non prior service accessions.

We are confident that we can continue to meet our manpower needs with volunteers. However, the sustained economic recovery and a further decline in the military age youth population between FY 1986 and FY 1987, combined with the widening gap between military and private sector pay increases and a sharp decline in enlistment propensity, will pose difficult recruiting challenges. To compensate for these difficult conditions, we must give adequate recruiting resources to the Services and afford Servicemembers and their families a reasonable standard of living.

(3) Personnel Management

(a) Enlisted

The retention of eligible first-term and career Servicemembers continues to be excellent. Since 1980, the average years of service of enlisted personnel have increased from 5.55 to 6.04, an increase of 8.8 percent. At the same time the average time served in each of the top six enlisted grades has increased by 10 percent, while the average grade of the force has increased by 5.2 percent. High retention of quality personnel ensures that the desired experience level will be more easily maintained over the long-term. However, shortages persist in certain skills, especially those containing highly trained technicians who are in demand by the civilian market.

Two of the primary incentives to attract and retain high quality personnel are the Enlistment and Selective Reenlistment Bonus programs. The bonus authorities (Sections 308 and 308a of Title 37, USC) have a termination date of September 30, 1987. Since the present laws were enacted, evidence has shown that the bonuses are needed and are being used in a cost-effective way. In FY 1987, DoD will submit legislation to make the bonus authorities permanent. Without the Enlistment Bonus, we would lose considerable drawing power in attracting personnel into critical military skills. In the retention area, we rely heavily on the Selective Reenlistment Bonus as the most effective means of retaining personnel with highly marketable technical skills and in arduous combat specialties.

Since the present bonus programs were authorized, the laws have been extended for short periods in order to evaluate the merits and cost-effectiveness of paying the bonuses. However, repetitive short-term extensions create uncertainty that seriously hampers the ability of the Services to plan their long-range recruiting and reenlistment programs with any assurance that the authority will continue. Granting DoD permanent authority would not usurp congressional control of its use, as congressional control can be effectively exercised through the annual authorization and appropriation process.

We have demonstrated that military manpower requirements can be met with a volunteer force, provided we offer competitive compensation, adequate family support, reasonable living and work conditions, and educational assistance programs that strengthen the benefits package by providing funds for post-secondary education. We can now focus on initiatives under way to ensure our manpower investment is well-managed. These efforts will allow us to manage our manpower more intelligently and demonstrate why we need the resources requested, how they contribute to readiness, and that they are used efficiently and effectively.

(b) Officers

While the total personnel picture is bright, two officer communities continue to experience retention problems. Our most serious deficiency is the continued shortage of nuclear trained submarine and surface officers in the grades of lieutenant commander through captain. The enhancements to Nuclear Officer Incentive Pay contained in the DoD FY 1986 Authorization Act are expected to reduce this shortage from a peak of 22 percent in FY 1986 to 11 percent by FY 1990. These shortages require the nuclear trained officer community to assign some exceptional lieutenants to engineering billets normally filled by lieutenant commanders. Thus, a continuation of the temporary authority to promote these officers to lieutenant commander is necessary to ensure that these critical billets are adequately filled.

The Services' aviator shortage also remains an area of considerable concern. The anticipation of continued pilot hiring by the airline industry through the 1980s suggests that this problem will continue for the near future. High pilot losses jeopardize the experience levels we need to stay mission-ready and substantially increase replacement training costs. To remain competitive for aviator resources, the Services' monetary incentives, Aviation Career Incentive Pay (ACIP) and Aviation Officer Continuation Pay (AOCP), must be maintained. Particular to the Navy, the AOCP, which specifically targets those tactical aviators who face shipboard deployment, is forecast to have a positive impact on the current 1,100 pilot shortfall, as are other initiatives aimed at this problem area. As long as the military pilot is in demand to fly commercial aircraft, retaining these resources will be difficult.

(c) Revised Procedures to Determine General/Flag Officer Requirements

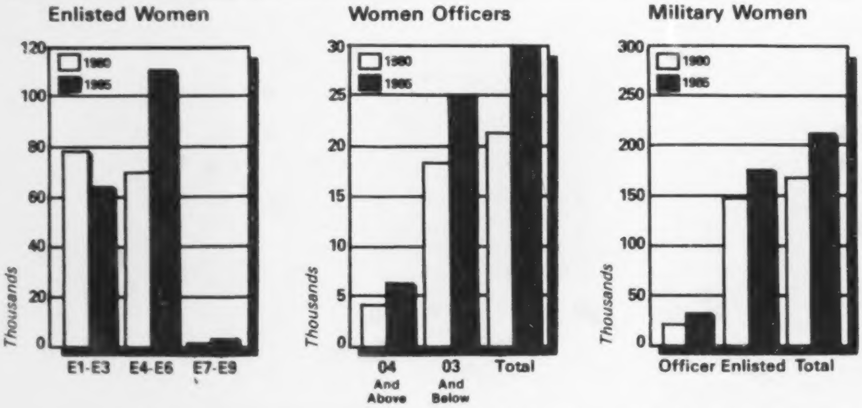
We again solicit congressional support for our legislative proposal to establish a new framework for the management of flag and general officers. This proposal has been submitted to the 97th, 98th, and 99th Congresses without enactment. As a result, it has been necessary for DoD to request annually specific ceiling relief at the three- and four-star grades to meet its essential senior flag officer requirements. Our legislative proposal would provide the necessary oversight, flexibility, and responsiveness required to administer changing flag and general officer requirements. Accordingly, it responds both to the needs of DoD and the desires of the Congress. In the interim, we urge the Congress to remove the general/flag officer ceiling mandated by the FY 1978 Defense Authorization Act and return to the strength level that existed prior to October 1, 1981, i.e., 1,119.

(d) Women in the Military

Since the end of FY 1980, the total number of military women has grown by more than 39,000, an increase of over 22 percent. The number of women officers alone has increased by more than 8,800 or 40 percent. The role of women extends throughout the grade structure as women gain seniority. These numbers are expected to continue to grow as more and more women recognize the career opportunities that are available to them in the military Services.

Chart III.A.7

Women in the Military



(4) Training

Rigorous, well-planned training is a cost-effective force multiplier. Good training enhances combat capability by producing forces that can perform their missions effectively in battle. While continuing our efforts to improve the quality and realism of training, we are also introducing initiatives in training technology and in the organization and management of training. DoD issued major policy statements during the past year directing the development and acquisition of training simulators and devices and the use of computer-based instruction. The new Defense Training Data and Analysis Center has begun work on a number of projects from its approved list of priority tasks.

When budgetary resources are constrained, as they are at present, there is a strong tendency to reduce operations and maintenance funding in order to achieve near-term savings while preserving the investment accounts. Funding for the activities and resources required to support collective unit training -- flying hours, ship steaming days, ground-force battalion training days -- is particularly vulnerable. Knowing that effective team training of military crews and units is indispensable for force readiness, we have resisted the inclination to reduce operations and maintenance funding. The resources in the FY 1987 budget request that support collective unit training can generally be described as marginally adequate. Nondeployed fleet steaming days will be sufficient, barring unforeseen operational requirements for the deployed fleets. However, flying hours and battalion training days are below required levels as computed by the Services.

To maintain acceptable readiness levels, we must have continued support for essential unit training requirements as well as adequate funding for the development of training technologies and for the analysis of data to make training more effective.

(5) Quality of Life and Family Matters

Our quality of life program improves the overall readiness of the Total Force. When Servicemembers are offered an attractive lifestyle, improved retention and duty performance are the documented results.

To attain this goal we have introduced a broad range of initiatives. We have a study under way that will provide information on quality of life (QOL) programs in other federal agencies and determine their transferability to DoD. The largest Nonappropriated Fund (NAF) construction program in history, nearly $500 million, will expand and upgrade NAF facilities at 400 locations worldwide. In October 1985, we received congressional approval to use nationally recognized credit cards in post exchanges. We are implementing pricing and distribution procedures that will ensure comparable pricing between overseas and CONUS commissaries and more timely delivery of merchandise to overseas stores. We have a safety and occupational health program that contributes to quality of life by reducing personal hardship and suffering through the prevention of accidental death, injury, and illness.

Where military bases are being expanded or created, DoD's economic adjustment program operates in close cooperation with local efforts to ensure that necessary public services, such as education, transportation, safety, and recreation, are available for the Servicemembers and their families.

To ensure that a comprehensive DoD family policy is formulated and published and that Service programs address family issues effectively, the DoD Family Policy Office was established February 1, 1985. This office has spearheaded sharing of family research plans and projects and improved information flow on family issues. It is involved with initiatives such as use of video cassettes to assist job hunters at employment centers, military spouse hiring preferences, and improved family member educational testing opportunities overseas.

In addition, the Military Family Resource Center conducted a DoD Child Sexual Abuse Policy Conference in September 1985 that was a major vehicle in the development of a coordinated DoD policy to combat this heinous crime.

(6) Compensation

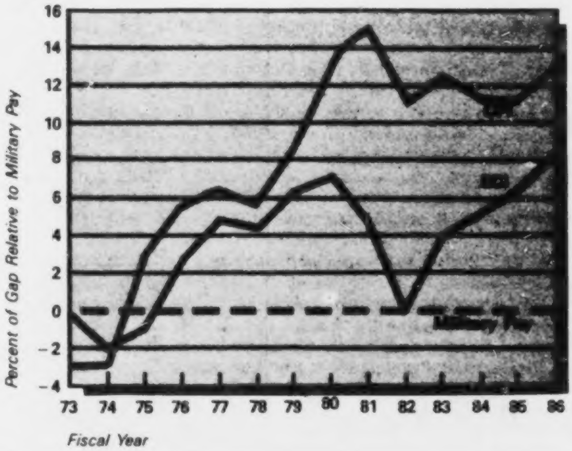
To continue to attract and retain the high quality personnel we need in today's Armed Forces, we must provide a compensation package that can compete with what the private sector can offer intelligent, highly skilled individuals. The improvements to compensation that we requested and that the Congress provided in the FY 1986 Authorization

Act are a major step in keeping us competitive with the private sector.

Due to fiscal constraints, however, DoD requested only a 3 percent pay raise for FY 1986, but asked the Congress to make that raise effective July 1, 1985, in order to offset the impact of a raise that was less than the projected private sector wage growth. The Congress granted the 3 percent across-the-board raise, effective October 1, 1985. Because of this pay cap, and the 4 percent pay caps in each of the preceding three years, military pay now lags private sector pay levels by 8.3 percent, as measured against the Employment Cost Index. If we are to avoid widening that gap further, and if we are to avoid the potential retention and recruiting degradation that would probably result from this pay comparability gap, the FY 1987 pay raise must closely parallel the projected private sector wage growth. The 4 percent military pay raise we are requesting will do this. Another pay cap in FY 1987 will only increase the disparity between military and private sector wage levels.

Chart III.A.8

Comparisons of Military Pay, ECI, CPI (Cumulatives)



In recognition of the unfairness of asking Servicemembers to incur out-of-pocket expenses when making a permanent change of station (PCS) move, the FY 1986 Authorization Act introduced a number of provisions to remedy this inequity. A major issue was removed by providing dependent per diem and mileage allowances at the rate authorized federal civilians. Temporary lodging expenses (TLE), a program that had been authorized but not funded for the past several years, was made an entitlement. These changes have moved more of the costs of carrying out government-directed travel from the Servicemember to the government, where they belong. There remain significant cost items requiring Servicemembers to subsidize part of the government's cost. One major request that was not made an entitlement was the increase in household goods weight allowances. The FY 1986 Appropriation Act provided funding to increase the allowances for junior enlisted members to 5,000 pounds for those with dependents, and to 1,500 pounds for those without dependents for both CONUS and overseas moves. Other than this most recent change, the existing weight allowances for uniformed Servicemembers were set in 1966 and have undergone virtually no change since then. Our Federal civilian employees, regardless of grade or dependency status, now have an allowance for 18,000 pounds of household goods. While the increase for junior enlisted members is appreciated, DoD strongly supports the recommended increases in household goods weight allowances for all personnel.

In the FY 1986 Authorization Act, the Congress provided other compensation improvements to enhance the quality of life of our military members. The authority for advanced payment of BAQ and variable housing allowance (VHA) will help alleviate some of the financial burden members experience when establishing a new household following a PCS move. A dependent dental care program will be implemented, although the program will be delayed at congressional direction until October 1, 1986. A burial expense allowance has been authorized to provide travel and transportation allowances for dependents of a deceased member to attend the burial. Servicemembers E-7 and above without dependents, who have established off-base housing prior to deployment, will now continue to draw BAQ and VHA beyond 90 days of sea/field duty. Funded travel while a ship is in overhaul has been improved to allow travel by the member's dependents when the cost would not exceed the cost of the member's travel.

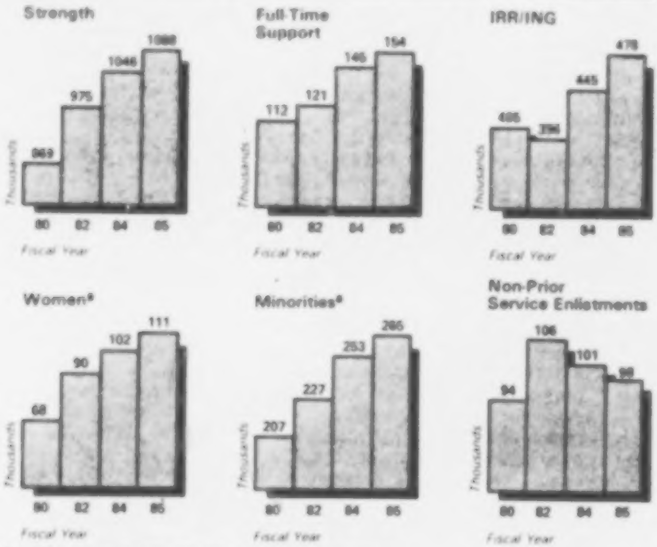
As mandated by the Congress, DoD has submitted legislation to reduce the military retirement fund by $2.9 billion. We continue to oppose strongly this method of legislating changes to the retirement system. We insist that whatever changes the Congress finally makes must not adversely affect the combat readiness of our forces, or violate the absolute commitments that have been made to retirees and those currently serving. The Congress must also be prepared to implement enhancements to the total compensation package necessary to offset the negative impact of changes to a system that is a major element of the military compensation program.

In competing for manpower, we function in a volatile world. We have only recently taken steps toward ensuring that we have a total compensation package that will allow us to compete equitably in that world. The continued shrinkage of the recruitable pool of military age youth makes it absolutely essential that we do not become complacent and allow ourselves to fall so far behind the private sector that we return to the difficult times we experienced in the late 1970s. We have, by all standards of measurement, the best military personnel we have ever had. We cannot afford to lose them by failing to provide a total compensation package that recognizes the hardships and sacrifices they endure as members of the Armed Forces.

b. Reserve Military Manpower

This Administration has supported extraordinary improvements in Reserve Component military manpower. Since FY 1980, the Selected Reserve has grown by 25.2 percent, including a 37.5 percent growth in full-time support. The Individual Ready Reserve is 18 percent larger. These improvements, together with readiness measures and equipment improvements outlined elsewhere in this report, are testimony to the fact that reliance on a Total Force policy is not a hollow slogan (see Chart III.A.9).

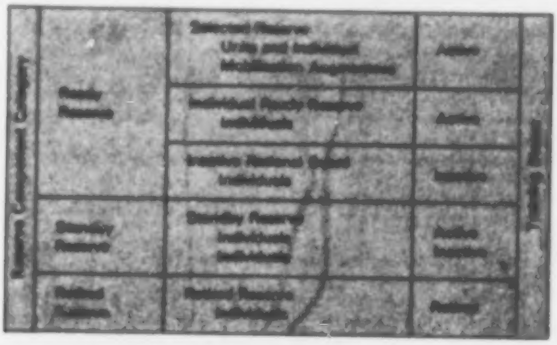
Chart III.A.9
Improvements in Reserve Component Manpower



*FY 1980 and FY 1982 data exclude Navy Training and Administration of Reserves (TARS). FY 1980 data exclude Category D Individual Mobilization Augmentees (IMAs).

Total reserve manpower consists of the Ready Reserve, the standby Reserve, and the Retired Reserve. The Ready Reserve has two categories: the Selected Reserve and the Individual Ready Reserve

Chart III.A.10
Reserve Forces Units and Personnel



(IRR)/Inactive National Guard (ING). Both the Selected Reserve and the IRR/ING are essential to initial wartime missions. The Selected Reserve comprises those organized units and individuals required to maintain the highest level of readiness in the Reserve Components. The IRR/ING consists of individual reservists who are not in the Selected Reserve but are subject to recall on an individual basis to provide initial augmentation of active or reserve units. The Standby Reserve contains those individual reservists who wish to remain affiliated with the reserves but are unable to participate in the Ready Reserve. Finally, the Retired Reserve contains reservists who have been transferred to a retired status in accordance with law or directive. As with all reserve manpower, they are subject to mobilization in time of war or national emergency, with different categories available under different levels of emergency authority.

(1) Selected Reserve Manpower Strength

Growth has continued, with the Selected Reserve attaining yet another all-time high strength level of 1,088,062 in FY 1985. Last year's strength of 1,045,828 exceeded the previous high set in 1959, which was 1,006,588. Today's record high levels were achieved without the draft inducement of 1959, when reserve membership could be substituted for conscripted service in the Active Component. The Army Reserve Components (Army National Guard and Army Reserve), traditionally the most difficult to fill, exceeded the overall DoD strength increase. They have posted a 26.2 percent increase since 1980. This growth trend should continue for all the components, although at a lesser rate. FY 1987 Selected Reserve end strength is programmed at 1,186,000. This would bring the overall strength increase since FY 1980 to 317,000 members, or over 36 percent (see Table III.A.2).

Table III.A.2
Selected Reserve Manpower[a]
(End Strength in Thousands)

	Actual		Programmed	
	FY 1980	FY 1985	FY 1986	FY 1987
Army National Guard	367	440	450	463
Army Reserve	213	292	311	328
Naval Reserve	97	130	142	156
Marine Corps Reserve	36	42	43	44
Air National Guard	96	109	111	115
Air Force Reserve	60	75	77	81
Total[b]	**869**	**1,088**	**1,135**	**1,186**

[a] Data for all years include Active Guard and Reserves (AGRs), Navy Training and Administration of Reserves (TARs), and Category D Individual Mobilization Augmentees (IMAs).

[b] Numbers may not add to totals due to rounding.

(2) Selected Reserve Personnel

In FY 1985, 42 percent of the Selected Reserve enlisted accessions had no prior military service. These recruits are necessary to man our entry level positions and provide the youth input required for a viable force. Even in the face of sustained economic growth, a smaller pool of military-age youth, and higher retention of members in the Active Components, the total number of enlistees has grown (see Table III.A.3).

Table III.A.3
***Selected Reserve Enlistments**[a]*
(Non-Prior/Prior Service in Thousands)

	Actual		Programmed	
	FY 1980	FY 1985	FY 1986	FY 1987
Army National Guard	50/47	30/44	48/45	51/46
Army Reserve	26/34	29/46	31/46	31/47
Naval Reserve	3/25	12/20	11/23	12/28
Marine Corps Reserve	5/4	9/6	9/6	8/6
Air National Guard	7/10	5/10	5/9	7/10
Air Force Reserve	3/10	3/10	4/10	4/11
Total[b]	**94/129**	**88/136**	**108/139**	**113/147**

[a] All data include Active Guard and Reserves (AGRs), Navy Training and Administration of Reserves (TARs), and Category D Individual Mobilization Augmentees (IMAs). Includes Navy Sea Air Mariner (SAM) recruiting program for FY 1985 and beyond.

[b] Numbers may not add to totals due to rounding.

This growth has been accompanied by increases in the quality of accessions. In FY 1980, 65 percent of new non-prior service recruits were high school graduates. (For the Army Reserve Components, the results were similar -- 64 percent.) By FY 1985, the high school graduate percentage had increased significantly to 85 percent for the total reserve force and to 83 percent for the Army Reserve Components. In addition, aptitude test score levels of non-prior service accessions also increased dramatically. In FY 1980, 73 percent of all non-prior service reserve accessions scored average or above on the entrance test, with 70 percent of the Army Reserve Components scoring average or above. In FY 1985 corresponding percentages were 90 percent for all Reserve Components and 89 percent for the Army Reserve Components (see Table III.A.4).

Table III.A.4
Non-Prior Service (NPS) Reserve Enlistments— High School Graduates and Entrance Test Category

	FY 1980		FY 1985	
	Number	Percentage of Total NPS Enlistments	Number	Percentage of Total NPS Enlistments
Total NPS Enlistments	93,700		97,800	
(Army Reserve Components)	(76,200)		(68,600)	
High School Graduates[a]	61,300	65	83,300	85
(Army Reserve Components)	(48,600)	64	(57,200)	83
Entrance Test Category I-III	68,300	73	87,900	90
(Army Reserve Components)	(53,300)	70	(60,800)	89

[a] Includes equivalency certificate and diploma graduates and students currently in high school who are expected to graduate.

Increased recruiting resources and targeted incentives have been major factors in providing DoD with a better quality, more highly motivated reserve soldier. Moreover, today's reservist stands a better chance of completing his term of enlistment. This lower attrition is reflected in the steady increase in Selected Reserve strength while recruiting requirements have only slightly increased. To meet our projected growth through 1990 of approximately 20 percent in end strength and to achieve our desired readiness posture, we must maintain the right mix of pay, incentives, and benefits for reserve members and their families.

Our support for enhanced roles for women and minorities in the Armed Forces can also be seen in the Reserve Components by the significant growth in both categories (see Tables III.A.5 and III.A.6).

Table III.A.5

Selected Reserve Women

(End Strength in Thousands)

	Actual			
	FY 1980[a]		FY 1985	
	Number	Percentage of Total End Strength	Number	Percentage of Total End Strength
Army National Guard	17	4.6	23	5.2
Army Reserve	29	14.1	48	16.5
Naval Reserve	5	6.2	13	10.0
Marine Corps Reserve	1	2.8	2	3.9
Air National Guard	8	8.5	12	11.2
Air Force Reserve	8	13.1	13	17.3
Total[b]	**68**	**8.0**	**111**	**10.2**

[a] All 1980 data exclude Navy Training and Administration of Reserves (TARs) and Category D Individual Mobilization Augmentees (IMAs).

[b] Numbers may not add to totals due to rounding.

DoD policy for placement of women in the Reserve Components is consistent with that for the Active Components. We are committed to providing women full and equal opportunities to pursue military careers for which they can qualify. The only limitation for women is contained in laws and policy excluding them from combat missions. However, this exclusion cannot be interpreted to allow the closing of career opportunities.

Table III.A.6

Selected Reserve Minorities

(End Strength in Thousands)

	Actual			
	FY 1980[a]		FY 1985	
	Number	Percentage of Total End Strength	Number	Percentage of Total End Strength
Army National Guard	94	25.8	115	26.0
Army Reserve	61	29.5	87	29.8
Naval Reserve	13	15.4	19	14.6
Marine Corps Reserve	12	32.8	11	26.6
Air National Guard	14	14.3	16	14.7
Air Force Reserve	13	21.9	17	23.1
Total[b]	**207**	**24.3**	**265**	**24.4**

[a] All 1980 data exclude Navy Training and Administration of Reserves (TARs) and Category D Individual Mobilization Augmentees (IMAs).

[b] Numbers may not add to totals due to rounding.

(3) Full-Time Support Personnel

Required growth continued in the level of full-time support needed by the Guard and Reserve, and a close correlation exists between this growth and the current high levels of reserve readiness. Further growth is projected, albeit at a slower rate than in recent years. The total full-time support strength for all Reserve components stood at about 14 percent of end strength at the end of FY 1985 (see Table III.A.7).

Table III.A.7
Full-Time Support Personnel[a]
(End Strength in Thousands)

	Actual		Programmed	
	FY 1980	FY 1985	FY 1986	FY 1987
Army National Guard	32	48	51	57
Army Reserve	17	30	31	31
Naval Reserve	20	24	27	32
Marine Corps Reserve	5	7	7	7
Air National Guard	26	32	33	34
Air Force Reserve	12	14	15	15
Total[b]	**112**	**154**	**163**	**175**
Percent of Selected Reserve	12.8	14.1	14.3	14.7

[a] Includes Active Guard and Reserve (AGR), Military Technicians (MT), Active Component (AC) Personnel, and Civil Service Personnel (CS).

[b] Numbers may not add to totals due to rounding.

(4) Individual Ready Reserve (IRR)/Inactive National Guard (ING)

The Individual Ready Reserve/Inactive National Guard is a primary source of pretrained manpower for mobilization. This manpower pool continues to increase in size. The current strength of 478,000 represents growth of 40 percent from a low of 342,000 in 1978. The projected strength of the IRR/ING for FY 1987 is 537,000 (see Table III.A.8). An additional growth of 126,000 to 663,000 is expected by 1990, principally as a result of the new eight-year military service obligation implemented in June 1984. The Reserve Components continue to employ management initiatives and the IRR Reenlistment Bonus Program to retain those with key skills and to reduce specific

Table III.A.8
Individual Ready Reserve and Inactive National Guard
(End Strength in Thousands)

	Actual		Programmed	
	FY 1980	FY 1985	FY 1986	FY 1987
Army National Guard (ING)	7	11	10	10
Army Reserve	199	302	319	336
Naval Reserve	97	72	85	94
Marine Corps Reserve	57	48	52	55
Air National Guard (ING)[a]	—	—	—	—
Air Force Reserve	45	46	39	43
DoD Total[b]	**406**	**478**	**504**	**537**

[a] Fewer than 500

[b] Numbers may not add to totals due to rounding.

shortages in combat and other critical wartime skills. The number of members receiving mobilization training continues to increase as a result of our programs to establish IRR refresher training. DoD has directed that an annual screening of IRR members be accomplished to ensure that the mobilization availability and personnel status of members remain current.

c. Civilian Manpower

(1) The Role of Civilians

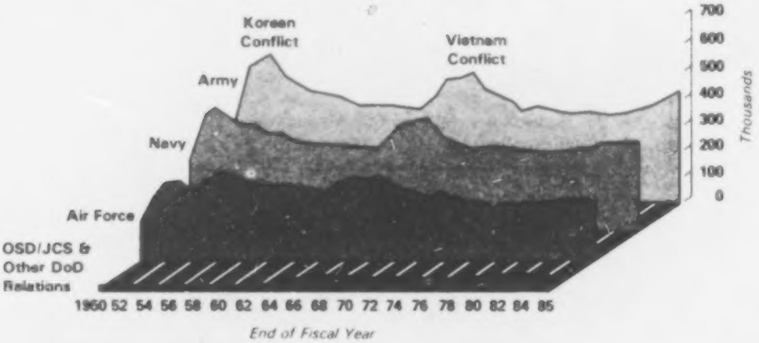
DoD has a long-established policy of employing civilians wherever possible to assist in maintaining our national security. This policy has a number of advantages. It minimizes the number of men and women required on active duty. Civilians also provide stability and continuity to those functions that require rotation of uniformed personnel. Finally, use of more civilians in the coming years may assist in meeting our total manpower demands as a declining youth population forces DoD to compete harder with the private sector for prospective recruits.

Civilians participate in all defense activities not potentially involving combat and account for one-third of all active DoD manpower. They comprise over half of DoD's personnel in research and development and base operations support and about 95 percent of all workers in depots, shipyards, and other logistics activities that directly affect the readiness of our forces. Many civil servants occupy overseas positions that would be essential to military operations in wartime. The mobilization chapter discusses how we would fill these essential positions during a crisis.

(2) Size of the Civilian Work Force

In FY 1987, DoD plans to employ about 1,115,000 civilians, of whom about 1,027,000 will be hired directly by the United States.

Chart III.A.11
Civilian Personnel Strength Levels

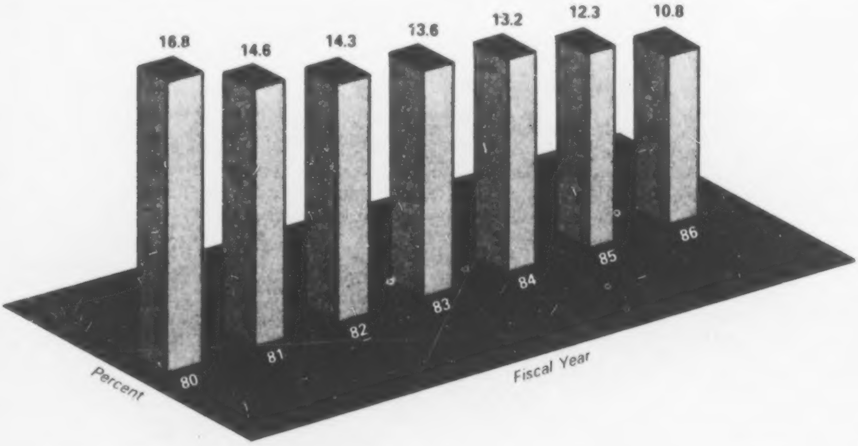


The remainder will be indirect-hires, foreign nationals paid by their own government for working at U.S. bases in accordance with Status of Forces Agreements. We reimburse the host country for the cost of these personnel.

These employment totals are almost 13 percent higher than FY 1980 levels and reflect increased defense resources and workload. Expansion in our overall defense program over the last five years has necessitated these additional employees. The increase in civilian manpower will continue to help DoD reduce depot maintenance backlogs, manage spare parts better, handle more foreign military sales, and civilianize former military positions, thus allowing the military to return to military positions and increase readiness. In spite of this growth, civilian manpower costs have declined as a share of the total DoD budget. In FY 1980, 17 out of every 100 dollars spent by DoD went for civilian related expenses. Six years later this portion has dropped to 11 out of every 100 dollars.

Chart III.A.12

Civilian Payroll Costs as Percent of Total DoD Outlays



As a result of congressional action, in FY 1986 we are not operating under any end strength ceiling on the number of civilians. This was also true in FY 1985. All DoD activities can employ the number of civilians needed to complete funded requirements approved by the Congress. We welcome this opportunity to demonstrate that we can manage all our programs more effectively without statutory end-of-year employment restrictions. During FY 1983, only DoD's industrially funded activities, such as depots and shipyards, were exempted by the Congress from ceilings. In FY 1984, military technicians were also exempted from ceilings. We benefited from this exemption in several ways. We gained through:

-- Greater ability to respond to unexpected workload changes;

-- Elimination of the need to drop workers from the rolls temporarily to avoid exceeding ceilings; and

-- Freedom to devote more emphasis to employee training and contract monitoring.

Just as important, these activities did not hire more civilians than were required to complete funded work. During FY 1986, DoD will report to the Congress the results of the removal of all hiring ceilings.

(3) Characteristics of Civilian Workers

About 32 percent of DoD's full-time employees, excluding indirect hires, are women, and 22 percent belong to a minority group. About two-thirds of our civilians are in General Schedule (GS) or General Manager (GM) positions and provide engineering, scientific, professional, technical, clerical, and administrative services. Our blue collar workers -- who are paid under the Federal Wage System -- repair ships, planes, tanks, and other equipment; maintain our installations; and provide most of the manpower for other logistics and supply operations.

The average grade of our GS/GM employees is about 8.2, up less than 0.4 in ten years. Four-fifths of this growth was due to a change in the composition of our work force, i.e., we hired proportionately fewer in occupations with lower average grades. This record was achieved during a time when defense technology became more complex and competition from the private sector for our scientists and engineers accelerated.

(4) Civilian Personnel Management

We continue our emphasis to improve employee productivity and to reduce the operating costs of our civilian personnel programs. As a part of Reform '88, DoD components were directed to reduce the number of automated civilian personnel data systems. We are implementing an executive development program that will enable DoD personnel to assume increasingly responsible positions as supervisors, managers, and executives. Although this program will concentrate initially on women, it will subsequently be open to all appropriate DoD personnel. We are also implementing policies to increase efficiency, promote the use of engineered staffing standards, and improve position management and the work force staffing process. Training policies and programs are being tailored to enhance organizational effectiveness, and compensation programs are being modified to control costs and provide for recruitment flexibility. The labor relations process is being monitored to minimize unnecessary impediments to economy and efficiency. We have before the Office of Personnel Management (OPM) a proposal to test innovative personnel management approaches at selected civilian personnel offices.

d. Summary

Although we have experienced great success in our manpower programs during this Administration, we cannot reduce our efforts now. We must continue to provide adequate resources and attention to recruiting, retention, compensation, and quality of life programs for each of our manpower components. Sufficient resource levels in each of these areas will allow us to achieve our goal of providing adequate manpower, in the right numbers, categories, and skills, to operate, maintain, and support our equipment and facilities effectively and efficiently. Inadequate manpower levels place a debilitating stress on our personnel, resulting in degradations in readiness and sustainability. Finally, history shows that while manpower losses can occur quite rapidly, it takes much longer to recoup such losses.

B. EQUIPPING THE FORCE

1. Land Forces

a. Introduction

(1) Force Rationale

Maintaining the nation's security requires our forces to be capable of protecting U.S. interests worldwide. The range of possible contingencies places particularly difficult demands on the land forces -- the Army and the Marine Corps. In coordination with allied armies, they must be capable of defeating the heavily armored, tactically mobile forces of the Warsaw Pact in Europe; of coming to the assistance of friendly states threatened by modern, well-equipped forces; and at the other extreme, of providing rapidly deployable forces for "show of force" missions or for operations against less sophisticated forces on difficult terrain.

We must maintain ready deterrent forces at key locations around the world. Likewise, our forces based in the continental United States (CONUS) must always be ready either to reinforce our forward-deployed forces or to deploy rapidly to other possible conflict areas.

Because of the wide variety of potential contingencies, structuring our land forces is a difficult problem. This problem is compounded as resources become constrained. Those forces capable of opposing the Warsaw Pact and other well-equipped mobile forces tend to be the most expensive and the most difficult to deploy, while those forces that can deploy rapidly -- predominately light infantry -- are less capable and less mobile upon arrival. Similarly, most rapid-response missions require highly trained and readily deployable active forces. Yet, because active forces are much more expensive than reserves, we desire to maintain as small an active force as feasible.

These are the factors that drive our force planning, and determine the size and mix of the forces we must maintain. First and foremost, we need to provide forward-deployed forces, rapid reinforcements for them in time of crisis, and rapid-response, "forcible-entry" forces for operations worldwide. Also, we need to give our forces adequate combat support (e.g., artillery and combat engineers) and combat service support (e.g., medical care and maintenance) to sustain them in peacetime and in war. We attempt to reduce costs and increase our capability for worldwide deployment through judicious prepositioning of equipment and supplies near areas where U.S. forces might be needed. Fiscal realities require that we rely to the maximum extent possible on assistance from allied forces and the citizen soldiers of the Reserve Components.

(2) Program Goals

Thus, consistent with fiscal realities and in light of our worldwide defense missions, our program seeks to provide the minimum essential number of combat forces that are:

-- Properly equipped;

-- Adequately supported; and

-- Carefully balanced, both between the Active and Reserve Components and between U.S. and allied capabilities.

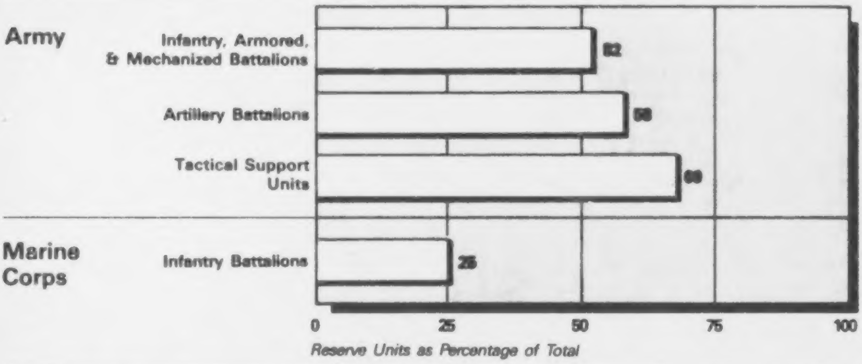
A complicating factor is the manpower intensity of land forces. Maintaining a large standing army entails high fixed costs both to pay and support it. Thus, the impact of fiscal constraints is felt especially by procurement programs. While the Army and Marine Corps failed to modernize in the early 1970s, the Warsaw Pact nations vigorously modernized and expanded their forces. Because our forces are (and are likely to continue to be) numerically smaller than those of the Warsaw Pact, it is essential that we maintain an advantage in modern weaponry. At the same time, however, we cannot afford to expend scarce funds on weapons that do not defeat the threat or whose poor reliability would place undue strain on our support systems.

(3) Force Composition

We have made no significant changes in our force structure plans since last year. The FY 1987 program continues our expansion toward a 32-division force, fleshing out the new divisions formed in FY 1985 and FY 1986 and establishing units to support them as they become deployable. The 32-division force will eventually comprise 21 active divisions (18 Army and 3 Marine) and 11 reserve divisions (10 Army and 1 Marine). Fully two-thirds of the support structure in FY 1987 will be in the Reserve Components. In addition, we will remain reliant on our allies for a significant amount of support both in Europe and Korea. Many of the reserve and allied units must be able to deploy within 10 days of mobilization -- a significant challenge and one that is compounded by deployability deficiencies.

Chart III.B.1.1

Projected Contribution of Reserve Components (End FY 1987)



Economic realities force the active divisions to rely on reserve forces to reach their full combat potential. Five of the 18 active divisions will draw one-third of their combat units from the reserves. Four other divisions will also rely on the Reserve Components to supply one or more combat battalions.

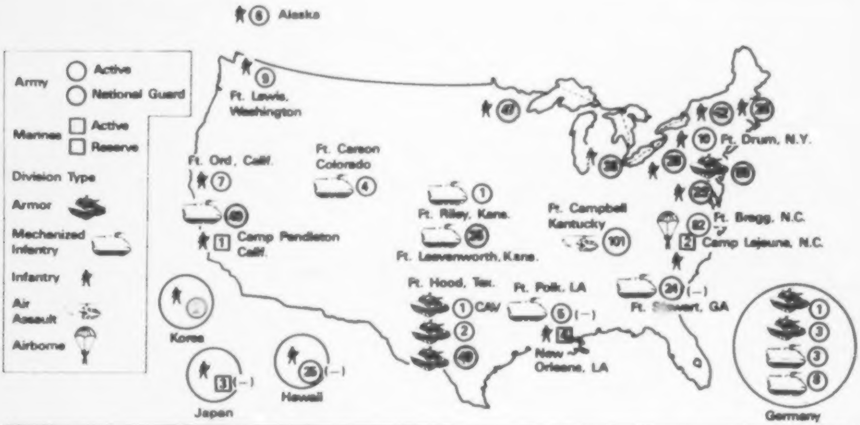
(4) Force Disposition

Chart III.B.1.2 shows the planned location of the Army's and Marine Corps' active and reserve divisions at the end of FY 1987.

In addition to the forward deployments shown, two brigades of CONUS-based Army divisions are stationed in Europe, and one Marine brigade is based in Hawaii. At the end of FY 1987, the Army will maintain one separate infantry brigade and two armored cavalry regiments in Europe, one separate Army National Guard infantry brigade in Hawaii, five active and eighteen reserve brigades and regiments in CONUS, one separate active infantry brigade in Panama, and a National Guard infantry brigade in Puerto Rico.

Chart III.B.1.2

Deployment of U.S. Divisions


6 Alaska
Army
Active
National Guard
Marines
Active
Reserve
Division Type
Armor
Mechanized Infantry
Infantry
Air Assault
Airborne
9 Ft. Lewis, Washington
Ft. Ord, Calif.
7
Ft. Carson Colorado
4
1 Camp Pendleton Calif.
Korea
3 (−)
Japan
25 (−)
Hawaii
47
1
Ft. Riley, Kans.
Ft. Leavenworth, Kans.
Ft. Campbell Kentucky
101
Ft. Hood, Tex.
1 CAV
2
Ft. Polk, LA
5 (−)
4
New Orleans, LA
10 Ft. Drum, N.Y.
82 Ft. Bragg, N.C.
2 Camp Lejeune, N.C.
24 (−)
Ft. Stewart, GA
1
3
3
8
Germany

b. *FY 1987-91 Programs*

(1) Force Structure

In FY 1987, we will continue to reorganize and consolidate the Army's active force structure. The light force structure will grow as the new active light divisions being formed take on additional battalions. The 6th Light Infantry Division, based in Alaska, will be activating two infantry battalions, and the 10th Mountain Division, at Fort Drum, New York, will add one more battalion. This will bring to five the number of active infantry battalions in each of those divisions. (Though the 10th Division will be headquartered at Fort Drum, the majority of its maneuver units will continue to be stationed at Fort Benning, Georgia.) Both divisions have been assigned Reserve Component roundout brigades. The 7th Division at Fort Ord, California, has completed reorganization to a light infantry division. The other light infantry division -- the 25th, based in Hawaii -- will complete reorganization in FY 1986.

The 9th Infantry Division will activate its last high-technology motorized battalion in FY 1987, completing its conversion to a high-technology motorized configuration. That division will continue to experiment with systems and concepts aimed at improving the capabilities of our light forces.

Additionally, we will reorganize both the 101st Air Assault Division and the 82d Airborne Division in light configurations. This reorganization was made necessary by the concepts developed for our other light forces.

Table III.B.1.1.

Distribution of Heavy and Light Forces (End FY 1987)

Divisions	**Heavy**	**Light**	**Total**
Active Army	10	8	18
Army National Guard	4	6	10
Active Marine Corps	—	3	3
Reserve Marine Corps	—	1	1
Total	**14**	**18**	**32**
Nondivisional Maneuver Brigades/Regiments*			
Active Army	6	3	9
Army Reserve Components	11	9	20
Total	**17**	**12**	**29**

*These units have not been assigned a roundout mission.

Programs for the Special Operations Forces (SOF) focus on improving their capabilities for operating across the spectrum of conflict, with near-term emphasis going to methods for countering terrorism. We will fill out the SOF units activated in FY 1984 and FY 1985, raising them to their full wartime authorization.

We are also continuing to adjust personnel strength in the nondivisional support units activated in recent years. The net result will be to raise authorized manning levels in Europe and the Pacific by 1,000 and 500 support spaces respectively, while CONUS strength will decline by 2,200.

The Reserve Component combat force structure will change slightly as we begin to reorganize two armored cavalry regiments into heavy brigades. The heavy divisions are continuing their conversion to a modified Division 86 configuration. The tactical support structure will increase by 11,600 spaces. These will be used to form a number of units, including a new area signal battalion.

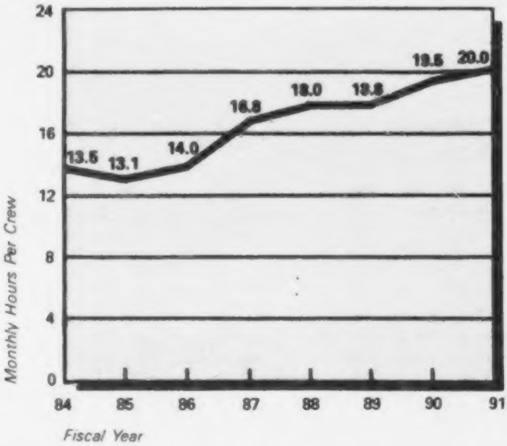
The new tactical support spaces in the reserves will increase the Army's ability to support the United States Central Command (USCENTCOM) without drawing down on forces needed for Europe. The major improvements in the units available to USCENTCOM will be readiness related, a result of increased manning, additional modern equipment, and increased participation in exercises.

(2) Readiness

Readiness remains our highest defense priority. We are working hard to give our forces vigorous and realistic training, and to develop more cost-effective tools for managing them. We have made significant progress in these areas over the past few years and expect to see continued gains in the future. But in this period of tightened fiscal cons›aints, those gains will come at a much slower pace than we had originally projected.

Chart III.B.1.3

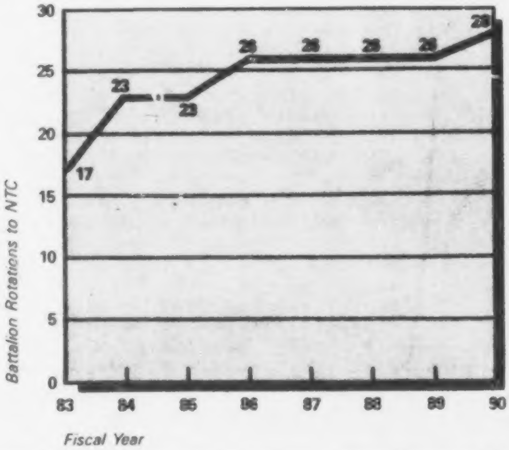
Monthly Flying Hours Per Crew
(Active Army Forces)



Training is the cornerstone of combat readiness for our land forces. Early deploying units will be only as ready for combat as

Chart III.B.1.4

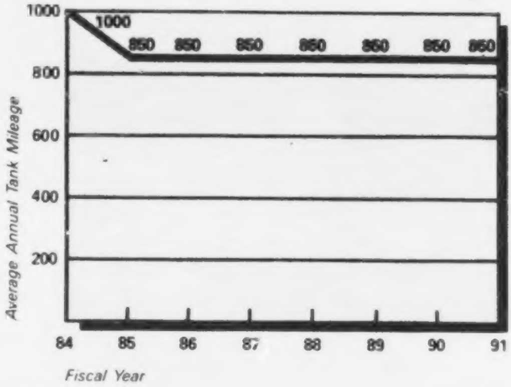
Battalion Rotations Through the
National Training Center
(Active Army Forces)



their peacetime training has made them -- there will be little or no time to correct training deficiencies after a war starts. Three useful measures of land forces' training are monthly flying hours per crew, battalion rotations through the National Training Center, and average annual tank mileage. Charts III.B.1.3 through III.B.1.5 show how the active force has fared in these areas over the past few years and the trends we project for the future.

Chart III.B.1.5

Average Annual Tank Mileage (Active Army Forces)



Important Army training initiatives include an increase in the Ranger training load from 2,100 to 3,000 students per year (to support the new light infantry divisions) and the allocation of $248 million to buy additional training equipment (to increase the capacity of the training base to accept recruits in the event of a full mobilization).

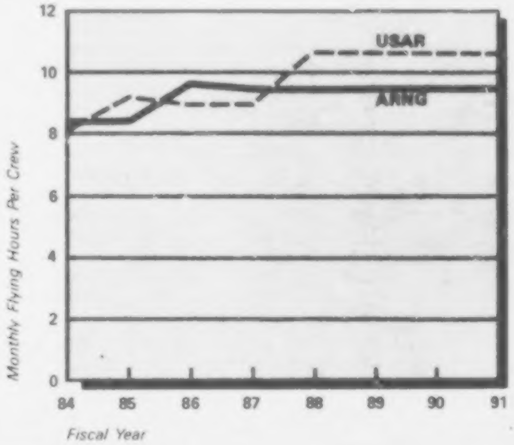
In recognition of the key role reservists would play in a major war, we continue to emphasize improvements in the amount and quality of training they receive. Charts III.B.1.6 and III.B.1.7 depict recent and projected trends in this area.

Overall, the Army's training posture has improved significantly over the past several years. Though we expect continued gains in the future, certain areas will feel the pinch of the tighter fiscal limits we now face. These include JCS exercises, ammunition purchases, and operating tempos of major combat systems such as tanks. Funding for exercises conducted or directed by the JCS will decline by about 9 percent. After three years of real growth, procurement of Army ammunition will decline in FY 1987, with the decreases distributed between training and war reserves. Our major combat equipment, however, will continue to operate at the FY 1985 levels. We expect that the increased availability of simulators and other training devices will help offset the lack of increased operating hours.

Chart III.B.1.6

Monthly Flying Hours Per Crew

(Army Reserve Forces)

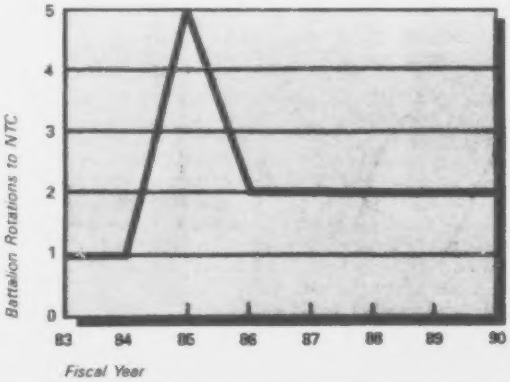


The continued infusion into the inventory of modern weapons and other equipment adds significantly to the readiness of our land forces. While many of these items are being used to relieve shortfalls, more frequently they are needed to replace older, less capable systems. But as with other readiness-related programs, the past year's reductions in projected funding levels have slowed significantly the pace at which new equipment can be added to the inventory.

Chart III.B.1.7

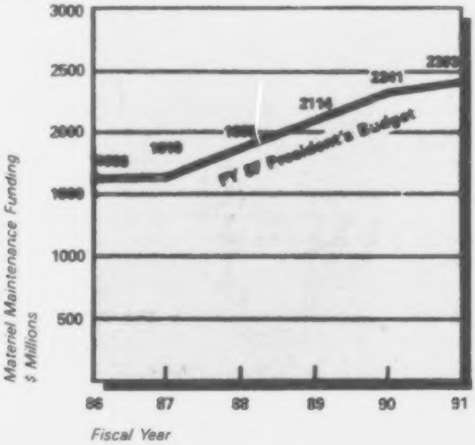
Battalion Rotations Through the National Training Center

(Army National Guard)



Fiscal constraints also affect our ability to maintain the equipment we already have. Thus, while the $1.61 billion budgeted for depot maintenance activities in FY 1987 is comparable with the FY 1986 level, in real terms it amounts to a slight decrease in program funding. As a result, the depot maintenance backlog will grow modestly in FY 1987 from zero in FY 1986.

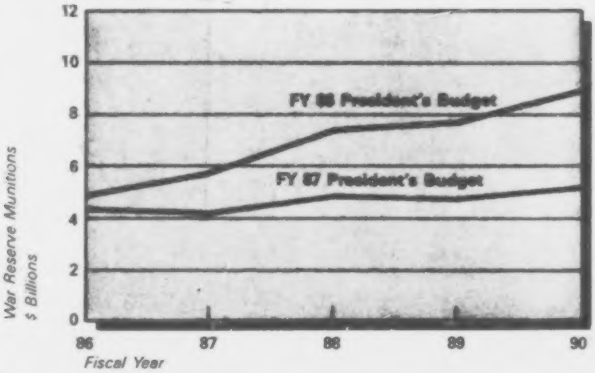
Chart III.B.1.8
Army Depot Maintenance



(3) Sustainability

Whereas readiness denotes our ability to fight on the first day of a war, sustainability measures our ability to continue to fight

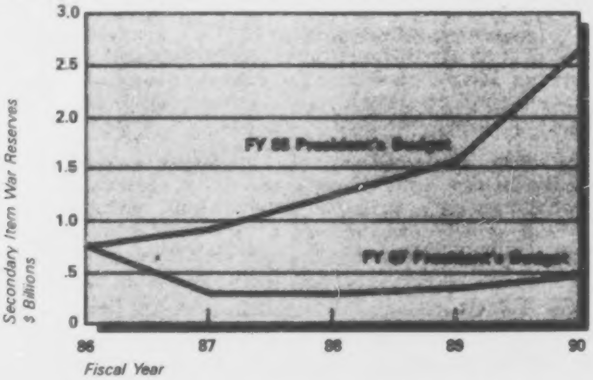
Chart III.B.1.9
Army and Marine Corps Munitions Funding



over a period of time. This "staying power" -- usually measured in days of supply -- is a function of a number of factors, including the amount of material on hand to replace items lost or consumed in combat, the availability of trained personnel to replace wartime casualties, the size of the support forces, and the amount of host nation support available.

Our sustainability program has also felt the effects of the less than expected growth in defense funding. We continue to build toward prudent stockage objectives for munitions, spare parts, and other secondary items, but at significantly slower rates than we had previously projected. Charts III.B.1.9 and III.B.1.10 compare programmed funding for munitions and secondary items in the FY 1986 President's Budget with the amounts being requested for FY 1987. It is clear that it will take us considerably longer than we had planned to reach our objectives. Our program to buy and preposition major items of equipment needed to replace combat losses continues but, once again, at a reduced level.

Chart III.B.1.10
Army Secondary Item War Reserve Funding



(4) Modernization

The FY 1987-91 program continues a major, and long-overdue, modernization of the land forces. We are replacing obsolete systems with modern equipment that will enable our forces to perform effectively against any potential opponent in any likely theater of operations. We are upgrading other systems to enhance their performance on the modern battlefield. And looking ahead to the future, we are applying emerging technologies to the development of new generations of weapons that promise even more significant gains in combat capability. Together, these efforts will give our forces the ability to employ the new AirLand Battle doctrine.

(a) Close Combat

Our land forces are well on the road to rebuilding their capability to counter a heavily armored opponent in close combat. The new weapons and equipment now entering the inventory are boosting their overall firepower, while providing them greater tactical mobility and better protection from enemy fire.

M1 Abrams Tank -- Procurement of the M1 tank will continue throughout the program period, enabling the Army to achieve its inventory objective of 7,467 M1s during the 1990s. The Marine Corps will make its first M1 purchases in FY 1989. More than half the Army's, and all the Marines', M1s will be of the improved M1A1 version. That version incorporates a larger, 120mm gun. The first production deliveries were made in August 1985.

Bradley Fighting Vehicle (BFV) -- The BFV, now being fielded with the Army's mechanized infantry battalions and cavalry squadrons, is improving the antiarmor and mechanized combat capability of the force. The vehicles to be produced in late FY 1986 will all carry the TOW 2 missile, significantly boosting their antiarmor capability. The 870 BFVs being requested in FY 1987 will bring total procurement to 4,541 -- or 66 percent of the Army's acquistion objective.

Assault Amphibian Vehicle (LVT7) -- The LVT7 is a lightly armored vehicle designed to carry Marine forces from ship to shore in amphibious assaults.[1] On the ground, it provides tactical mobility and protection for infantry units. By the end of FY 1986, the Corps will have 1,317 of these vehicles --, all in the improved LVT7A1 configuration. Of that amount, 333 will be new vehicles and the remaining 984 rebuilt LVT7s.

Light Armored Vehicle (LAV) -- The LAV increases the ground mobility, survivability, and firepower of the Marine Corps. The vehicle is being produced in six versions, designed for use in antiarmor, direct and indirect fire, command and control, logistics, and recovery operations. The basic vehicle is armed with a 25mm cannon.

TOW Missile System -- The Army and Marine Corps are continuing to build their inventories of TOW 2 antitank missiles. These weapons, incorporating an improved warhead, electro-optical countermeasures, and guidance system, will give our antiarmor forces a means of defeating technologically advanced armored systems.

	FY 1985 Actual Funding	FY 1986 Planned Funding	FY 1987 Proposed Funding	FY 1988 Proposed for Authorization
M1 Tank[a]				
Development:				
$ Millions	52.2	21.7	30.9	25.4
Procurement:				
Quantity	840	840	840	840
$ Millions	1,878.8	1,945.7	2,115.9	2,167.9
BFV				
Development:				
$ Millions	23.7	23.3	20.0	13.8
Procurement:				
Quantity	655	716	870	870
$ Millions	1,022.7	962.4	1,200.7	1,244.9

[a] Includes Army and Marine Corps funding.

[1] A lightly armored vehicle protects its occupants from small-caliber weapons fire and fragments from exploding artillery projectiles, grenades, and other munitions.

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[1] A lightly armored vehicle protects its occupants from small-caliber weapons fire and fragments from exploding artillery projectiles, grenades, and other munitions.

	FY 1985 Actual Funding	FY 1986 Planned Funding	FY 1987 Proposed Funding	FY 1988 Proposed for Authorization
LVT7				
Procurement:				
Quantity	244	—	—	—
$ Millions	100.4	—	—	—
LAV[b]				
Development:				
$ Millions	8.8	16.8	30.0	40.6
Procurement				
Quantity	292	—	—	—
$ Millions	223.6	—	—	—
TOW Missile[a]				
Development:				
$ Millions	11.9	11.7	14.9	18.9
Procurement				
Quantity	15,822	16,938	15,400	15,400
$ Millions	233.4	200.4	182.1	210.7

[a] Includes Army and Marine Corps funding.

[b] Includes the basic vehicle and variants.

(b) Land Forces Aviation

1. Helicopters

The Army and Marine Corps maintain a versatile fleet of helicopters to support their combined-arms teams. The missions of these aircraft range from detecting and engaging enemy armored formations to transporting troops and equipment within combat theaters. Many of the systems now in service will need to be replaced or upgraded to meet future operational requirements. Over the next five years, we will be continuing a major modernization of the fleet, designed to enhance the firepower of the ground attack component, add lift capacity in the assault-support elements, and improve survivability forcewide.

Attack Helicopters -- The AH-64 Apache will add substantially to the antiarmor capability of Army forces. Armed with the Hellfire missile system, the helicopter will be able to operate day or night in all kinds of weather, anywhere in the world.

In FY 1986, the Marine Corps will take delivery of the first of 44 AH-1T Super Cobra helicopters it is adding to its fleet. The new aircraft will be powered by improved engines and carry a mix of Hellfire and TOW air-to-surface missiles and Sidewinder air-to-air missiles. The 46 AH-1Ts currently operated by the Fleet Marine Force will also receive the new engines and missile system.

Assault-Support Helicopters -- To improve the tactical mobility of its forces, the Army is fielding new UH-60 Blackhawk helicopters and modifying its existing fleet of CH-47 Chinooks.

A larger, more agile, and less vulnerable aircraft than the UH-1 (Huey) it replaces, the Blackhawk is able to deliver 50 percent more cargo and troops over greater distances at higher airspeeds, providing commanders added flexibility in employing their troops. When equipped with an external stores support system, the Blackhawk will be able to self-deploy over 1,100 nautical miles without refueling.

In the medium-lift category, the CH-47D modernization program will improve its overall reliability and maintainability and reduce its vulnerability to enemy fire.

The Marine Corps has two programs under way to modernize its inventory of assault-support helicopters. It is acquiring additional heavy-lift capacity by continuing procurement of the three-engine CH-53E Super Stallion, the free world's largest helicopter. That aircraft, along with the JVX (discussed in the next section), is key to the new concept the Corps is developing for launching amphibious assaults from points beyond the horizon. (A detailed explanation of that concept is provided in the Naval Forces chapter.) The CH-46E -- the workhorse of the medium-lift fleet -- is undergoing a major upgrade to improve its safety, reliability, and maintainability. That program will enable the CH-46E fleet to remain in service into the 1990s.

Scout Helicopters -- Entering service this year is the Army's newest observation helicopter, the OH-58D. More agile and survivable than the earlier-model OH-58 it succeeds, the OH-58D will be used primarily to find and designate targets for artillery units. What distinguishes it from previous scout helicopters is its mast-mounted sight containing advanced sensors and optical systems and a laser rangefinder/designator. These features will enable the OH-58D to operate during periods of bad weather and reduced visibility.

2. Developmental Aircraft

Revolutionary advances in aviation technology are paving the way for entirely new generations of military aircraft. A new "tilt-rotor" aircraft, for example, is being designed to have the lift and versatility of a helicopter but the speed, range, and survivability of a fixed-wing plane. If demonstrated to be effective and affordable, the JVX (for Joint Services Advanced Vertical-Lift Aircraft) would be purchased by all the Services for use in a variety of roles, including air assault, special operations support, and combat search-and-rescue missions. The 1991 deployment date planned for this new aircraft is critical to avoiding a shortfall of medium-lift aircraft in the Marine Corps' inventory.

The Army is developing a new family of light rotorcraft (LHX) to replace its aging fleet of AH-1, OH-58, and OH-6 helicopters, and to replace the UH-1 in units not slated to receive UH-60s. The aircraft will be produced in two versions, one designed for utility missions and the other for use in the scout or attack role. Initial deliveries are expected in the early 1990s.

AH-64	**FY 1985 Actual Funding**	**FY 1986 Planned Funding**	**FY 1987 Proposed Funding**	**FY 1988 Proposed for Authorization**
Development:				
$ Millions	27.7	9.9	12.9	6.1
Procurement:				
Quantity	138	144	144	78
$ Millions	1,412.8	1,270.3	1,342.0	902.9

	FY 1985 Actual Funding	FY 1986 Planned Funding	FY 1987 Proposed Funding	FY 1988 Proposed for Authorization
AH-1T				
Procurement:				
Quantity	22	22	—	—
$ Millions	211.6	205.3	37.2	7.1
Hellfire[a]				
Development:				
$ Millions	.5	4.9	14.4	25.3
Procurement:				
Quantity	6,218	7,054	—	6,624
$ Millions	249.4	273.4	—	255.0
UH-60				
Development:				
$ Millions	2.6	16.8	—	—
Procurement:				
Quantity	86	80	78	85
$ Millions	459.1	430.7	355.0	536.6
CH-47D				
Procurement:				
Quantity	48	48	48	48
$ Millions	442.4	362.3	276.6	247.4
CH-53E				
Procurement:				
Quantity	8	5	10	6
$ Millions[b]	177.8	90.7	157.4	103.3
JVX				
Development:				
$ Millions	177.3	555.3	386.9	483.1
OH-58D				
Procurement:				
$ Millions	234.9	237.5	246.7	260.3
LHX				
Development:				
$ Millions	71.6	114.2	155.6	344.1

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[a] Includes Army and Marine Corps funding.

[b] The Fy 1985 figure includes the start-up costs of a multiyear CH/MH-53E procurement contract.

(c) Air Defense

Our land forces deploy a balanced mix of systems to defend against aircraft and missile attacks. Shorter-range (point defense) systems, such as Stinger and Chaparral missiles and antiaircraft guns, are designed primarily to protect troops and equipment near the front lines (e.g., forward command posts and maneuver units). Longer-range (area defense) systems, such as Patriot and Improved Hawk missiles, guard larger, more widely dispersed areas of the battlefield (e.g., corps command and control facilities and airfields). These weapons are supported and linked by a network of radar, command and control, and electronic warfare systems.

1. Short-Range Systems

Stinger -- The Stinger is a shoulder-fired, infrared-guided missile that can be carried by a single soldier or marine. Designed to defend against low-flying aircraft at relatively short ranges, the missile is being purchased jointly by the Army and Marine Corps to replace the aging Redeye. In FY 1984, an improved version, with increased resistance to enemy countermeasures, entered production. That system, called Stinger-POST, is scheduled for fielding in FY 1987. A further product improvement, a reprogrammable microprocessor going into production this year, will allow us to respond more rapidly to future changes in enemy countermeasures. In the coming years, the Army will also be introducing a new, air-to-air launcher for the missile, designed to give its helicopter forces a self-defense capability.

Chaparral -- Currently deployed with most active Army divisions, Chaparral will soon be consolidated at the corps level. To enable the missile to engage targets at night and in poor weather, we are fitting it with a forward-looking infrared (FLIR) night sight. For the future, we are developing an improved guidance system that will be highly resistant to infrared countermeasures. With these modifications, the Chapparal will be able to remain in service through the end of the century.

Short-Range Air Defense Command and Control (SHORAD C^2) -- To take maximum advantage of the capabilities afforded by its forward-area air defense systems, the Army is developing a new automated command and control system for use at the division and corps levels. Called SHORAD C^2, the system will be able to alert maneuver forces to enemy air threats as well as transmit engagement instructions to Chaparral and Stinger operators.

2. Long-Range Systems

Patriot -- The Patriot is the Army's advanced all-altitude air defense missile. The system's multifunction, phased-array radar enables several missiles to be directed to their targets simultaneously, even under jamming conditions. A state-of-the-art system, the Patriot will be highly effective against any enemy aircraft likely to be encountered through the end of the century. In December 1984, the Army began fielding the missile in Europe, where it will form the backbone of NATO's future air defense system. Several allied nations are also considering procuring the Patriot for their forces.

Hawk -- Hawk is a medium-range air defense guided-missile system designed to provide air defense coverage against low to medium altitude air attack. In the field since 1960, it is a mobile all weather, day or night missile system providing vital air defense against enemy air attack. Hawk has superior fire control, lethality, range, reliability, and effectiveness in an electronic countermeasures environment. Currently, Hawk is being reorganized into a more streamlined and efficient fighting organization with system improvement efforts focusing on enhancing mobility and firepower while reducing manpower requirements.

	FY 1985 Actual Funding	FY 1986 Planned Funding	FY 1987 Proposed Funding	FY 1988 Proposed for Authorization
Stinger/Stinger-POST[a]				
Development:				
$ Millions	5.0	23.3	6.3	—
Procurement:				
Quantity	3,060	4,239	5,622	7,864
$ Millions	266.1	304.5	361.3	471.8
Air-to-Air Stinger				
Procurement:				
Quantity	—	—	68	495
$ Millions	—	—	28.8	41.5
Chaparral				
Procurement:				
Quantity	—	—	456	960
$ Millions	31.0	54.9	103.7	114.5
SHORAD C^2				
Development:				
$ Millions	18.4	32.6	82.1	116.2
Patriot				
Development:				
$ Millions	61.1	50.8	40.2	50.2
Procurement:				
Quantity[b]	440/12	585/12	700/12	715/12
$ Millions	958.8	928.1	996.8	952.8
Improved Hawk				
Development:				
$ Millions	32.9	21.5	5.1	13.3
Procurement:				
Quantity	500	550	430	550
$ Millions	124.8	122.7	115.4	147.5

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[a] Includes Army and Marine Corps funding.
[b] Includes missiles and firing units.

(d) Artillery Fire Support

To offset the Warsaw Pact's numerical superiority and near technological parity with NATO in ground maneuver forces, we must improve the ability of our forces to detect advancing enemy formations and mass large volumes of accurate, effective firepower against them. To that end, we are upgrading the target acquisition and fire control capabilities of our fire support systems, developing new munitions with improved laser-homing capabilities, and increasing the overall sustainability of our fire support forces on the modern battlefield.

Target Acquisition -- The Army is working on two new systems that will provide long-range targeting support for its missile and artillery batteries. The Joint Surveillance and Target Attack Radar System (Joint STARS), described in more detail in the Deep Battle section, will be able to locate and track moving targets at extended ranges. The Remotely Piloted Vehicle (RPV), an unmanned aircraft, will be used to locate and designate targets for laser-guided weapons and to provide firing data for artillery units.

Fire Control -- Under development by the Army, the Advanced Field Artillery Tactical Data System (AFATDS) is a new-generation automated fire control system designed to increase the efficiency and targeting capacity of all available fire support means. In procurement is the Army's and the Marine Corps' Battery Computer System (BCS), a small computer designed to provide firing data for individual guns. The BCS can either stand alone or be linked to the Tacfire automated fire control system.

Weapons and Support Systems -- The Multiple-Launch Rocket System (MLRS) is a high-rate-of-fire weapon assigned to general-support artillery units. It can be used to supplement cannon artillery fire or to strike targets, such as enemy artillery and air defense systems, beyond cannon range. A single launcher can fire its load of 12 rockets in less than a minute, covering an area the size of six football fields with approximately 7,700 grenade-like submunitions effective against both personnel and lightly armored targets. The Army began deploying the MLRS in FY 1983 and is using multiyear procurement authority for its continued production. At the same time, as part of a multinational program with Germany, France, and Great Britain, the Army is working on a warhead for the system that will be able to dispense terminally guided submunitions.

Over the coming years, the Army and Marine Corps will continue modernizing their inventories of howitzers. The FY 1987 budget seeks funds for additional M198 155mm towed howitzers for the Marine Corps and for the Howitzer Improvement Program, under which the Army is upgrading its self-propelled M109s. Entering procurement in FY 1987 will be a new towed 105mm howitzer for the Army's light infantry divisions.

The Army has recently taken delivery of its first Field Artillery Ammunition Support Vehicles (FAASVs). These highly mobile tracked vehicles will provide armor protection for ammunition, and will carry equipment to prepare and supply ammunition for howitzers. They will be assigned to self-propelled artillery units in Europe and Korea and to selected CONUS units.

Ammunition -- The Army and Marine Corps are continuing to build their inventories of improved conventional munitions, 155mm howitzer-delivered scatterable mines, and 155mm laser-guided Copperhead artillery projectiles. A large number of these items have been earmarked for the war reserve stocks.

	FY 1985 Actual Funding	**FY 1986 Planned Funding**	**FY 1987 Proposed Funding**	**FY 1988 Proposed for Authorization**
RPV				
Development: $ Millions	97.8	73.9	91.9	19.4
Procurement: $ Millions	—	31.7	141.9	225.6
AFATDS				
Development: $ Millions	29.2	19.8	40.4	67.2
Procurement: $ Millions	—	25.6	—	10.7

	FY 1985 Actual Funding	FY 1986 Planned Funding	FY 1987 Proposed Funding	FY 1988 Proposed for Authorization
BCS[a]				
Procurement:				
Quantity	167	255	66	—
$ Millions	28.7	44.8	11.0	—
MLRS[b]				
Procurement:				
Quantity	50,472/44	72,000/44	72,000/44	72,000/44
$ Millions	509.0	509.9	474.2	480.2
MLRS TGSM				
Development:				
$ Millions	24.5	30.3	42.7	52.2
M198 Howitzer[a]				
Procurement:				
Quantity	—	50	94	18
$ Millions	—	26.7	45.0	11.9
Light Howitzer				
Procurement:				
Quantity	—	—	64	120
$ Millions	—	—	26.5	32.0
FAASV				
Procurement:				
Quantity	170	150	131	155
$ Millions	81.5	64.8	67.7	77.4

[a] Includes Army and Marine Corps funding.

[b] Includes rockets and launchers.

(e) Deep Operations

Emerging technologies are providing our land forces with radically new techniques for defeating armored attacks. Moving targets deep behind enemy lines will be located and tracked by long-range detection systems. Intelligence and fire control information from multiple sources will be rapidly processed by computers and distributed to tactical commanders for targeting decisions. Targets will be attacked by aircraft and missiles delivering a variety of munitions, including terminally guided submunitions. In this way, our forces will be able to carry the fight to the enemy in synchronized operations against both the front and rear lines. Enemy forces will be attacked where they are most vulnerable, denying them the initiative and forcing them to react to our battlefield activity. This warfighting concept, prescribed by the new AirLand Battle doctrine, seeks to maximize the capabilities made possible by new technologies, thus helping our forces to overcome their opponent's advantage in numbers of troops and weapons.

Joint Surveillance and Target Attack Radar System (Joint STARS) -- This airborne detection system, being developed jointly by the Army and the Air Force, will be able to monitor and assist in attacking moving targets well before they reach the main battlefield. Drawing on the information it provides, our forces will be able to use their advanced weapons systems to attack targets deep behind enemy lines.

Joint Tactical Fusion Program (JTFP) -- Under this program, the Army and Air Force are developing an automated system to process, analyze, and distribute intelligence reports gathered from multiple sources. This information will assist battlefield commanders in assessing the status and disposition of enemy forces and in selecting targets.

Army Tactical Missile System (ATACMS) -- This new missile, fired from existing MLRS launchers, will be able to dispense submunitions against targets deep behind enemy lines. Designed to exploit the long-range vision of our new target acquisition and guidance systems, the missile will enable attacks to be directed against enemy follow-on forces, air defense systems, tactical ballistic missile launchers, and command and control facilities.

	FY 1985 Actual Funding	FY 1986 Planned Funding	FY 1987 Proposed Funding	FY 1988 Proposed for Authorization
Joint STARS[a]				
Development:				
$ Millions	96.4	231.4	383.6	341.7
Procurement:				
$ Millions	5.0	—	63.4	107.9
JTFP[a]				
Development:				
$ Millions	76.9	155.2	168.2	93.7
ATACMS				
Development:				
$ Millions	76.4	101.5	80.7	97.7

[a] Includes Army and Air Force funding.

(f) Tactical Wheeled Vehicles

The Army and Marine Corps are continuing to improve the ground mobility of their forces by upgrading their overage, over-mileage fleets of tactical wheeled vehicles. As part of that effort, they began fielding the High Mobility Multipurpose Wheeled Vehicle (HMMWV) in FY 1985. This versatile 5/4-ton vehicle is being used to replace a portion of the jeep inventory and other vehicles in the 1/4- to 5/4-ton range.

In the 10-ton category, the Army is procuring the Heavy Expanded Mobility Tactical Truck (HEMTT). The truck is being produced in five body styles for use by combat and combat support units. The Marine Corps is procuring a variant of the HEMTT, called the Logistics Vehicle System (LVS), for its combat support forces. The LVS comes with four interchangeable rear-body units. By integrating the two programs, we were able to accelerate the introduction of the Marine Corps' trucks by more than a year. Army units began receiving their HEMTTs in FY 1982, while the Marine Corps began fielding its version in FY 1985.

	FY 1985 Actual Funding	FY 1986 Planned Funding	FY 1987 Proposed Funding	FY 1988 Proposed for Authorization
HMMWV				
Procurement:				
Quantity[a]	15,288	16,984	13,585	4,565
$ Millions	383.1	426.3	349.4	128.5
HEMTT				
Procurement:				
Quantity	1,290	651	1,523	396
$ Millions	199.6	116.1	234.3	70.4
LVS				
Development:				
$ Millions	0.039	0.7	0.06	—
Procurement:				
Quantity	708	719	1,246	382
$ Millions	66.7	69.1	104.0	28.6

[a] Includes Army and Marine Corps funding.

(g) Tactical Command, Control, and Communications and Electronic Warfare

In equipping our land forces, it is not enough merely to provide them with modern weapons systems; we must also be able to direct their operations efficiently in battle. To that end, we are developing a variety of command, control, communications, and intelligence (C^3I) systems that will enable tactical commanders to locate and gather information about enemy forces; assist them in analyzing that information; provide jam-resistant, secure communications links between headquarters and subordinate units; and allow our forces, through the use of electronic warfare, to disrupt enemy communications and intelligence gathering. With these capabilities, our land forces will have the flexibility and responsiveness to defeat any opponent. (Additional details on C^3I systems can be found in Chapter III.D.)

Ground Mobile Forces (GMF) Satellite Communications -- The GMF will provide reliable, jam-resistant communications support for battlefield commanders. By using satellite communications, we provide commanders with a means of transmitting timely orders and intelligence reports over long distances. The Army, Air Force, Marine Corps, and Readiness Command have procured more than 300 GMF terminals and supporting equipment. Fielding of the Multichannel Initial System commenced in FY 1985.

Single-Channel Ground and Airborne Radio System VHF (SINCGARS-V) -- These very high frequency (VHF) radios will provide a secure, jam-resistant replacement for the aging equipment now in use in combat battalions and companies. The Army is scheduled to field the new radios in FY 1987, and the Marine Corps plans to introduce them in FY 1989.

Army Data Distribution System (ADDS) -- A digital communications system, the ADDS will provide secure, jam-resistant data links for command and control, intelligence, air defense, fire support, electronic warfare, and combat service support computer systems. It will also provide information on the position and location of friendly ground forces, thereby allowing more precise battlefield navigation. The system is scheduled to be fielded in FY 1988.

Maneuver Control System (MCS) -- This automated command and control system will quickly process battlefield data into useful information to help tactical commanders make sound combat decisions. The system will also prepare and send the orders implementing those decisions. MCS, which is being fielded in FY 1986, has been developed through a unique, evolutionary program with the direct participation of its eventual users.

Mobile Subscriber Equipment (MSE) -- This tactical communications system will provide automatic, secure field telephone and data services at the corps and division levels. Commanders and their staffs will be able to transmit and receive both voice and data communications through mobile, automatic switchboards interconnected by radio links. MSE will also provide mobile radio telephone service that commanders can use from their vehicles and mobile command posts. The Army will begin fielding the system in FY 1987.

Electronic Warfare (EW) -- To increase its ability to disrupt enemy communications, the Army is procuring additional tactical jamming systems such as the MLQ-34 TACJAM and the EH-60 Quick Fix helicopter. Tactical intelligence systems are being modernized through continued production of Trailblazer (TSQ-114A), Teammate (AN/TRQ-32), and Teampack (MSQ-103), and upgrades to existing systems.

Communications Security (COMSEC) -- The Army is procuring several types of modern COMSEC equipment. These systems provide secure communications links over which commanders can transmit orders and intelligence information without giving the enemy an opportunity to eavesdrop.

Joint Tactical Communications Program (TRI-TAC) -- Under the joint-Service TRI-TAC program, the Army and Marine Corps are providing more modern communications equipment for their forces. The Army is now fielding a new family of automatic switchboards at echelons above the corps level, and soon will begin receiving up-to-date radio transmission systems. The Marine Corps is developing new automatic switchboards to replace the old manual equipment now in service at unit level.

	FY 1985 Actual Funding	FY 1986 Planned Funding	FY 1987 Proposed Funding	FY 1988 Proposed for Authorization
GMF				
Procurement:				
$ Millions	48.3	58.6	13.4	43.6
SINCGARS-V				
Development:				
$ Millions	7.0	12.7	13.9	6.7
Procurement:[a]				
Quantity	10,600	400	16,000	19,000
$ Millions	126.0	110.8	211.7	316.1
ADDS				
Development:				
$ Millions	23.9	37.3	42.1	22.6
Procurement:				
$ Millions	—	31.8	84.0	173.1

[a] Includes Army and Marine Corps funding.

	FY 1985 Actual Funding	FY 1986 Planned Funding	FY 1987 Proposed Funding	FY 1988 Proposed for Authorization
MCS				
Development:				
$ Millions	21.9	8.6	9.4	14.9
Procurement:				
$ Millions	27.9	59.9	56.9	57.4
MSE				
Procurement:				
$ Millions	63.3	335.3	903.7	1,019.8
TRI-TAC				
Development:				
$ Millions	40.3	30.2	17.4	20.2
Procurement:				
$ Millions*	163.8	169.5	235.2	330.4

* Includes Army and Marine Corps funding.

c. Conclusion

We have made substantial progress in revitalizing the combat strength of the Army and Marine Corps. The FY 1987-91 program will bring further gains, although at a slower rate than we hoped at this time last year, moving us closer to our goal of creating:

-- A credible and efficient force, equally capable of peacetime deterrence and wartime success;

-- A modern, balanced, and strategically mobile force armed with advanced weapons systems and maintained at a high level of personnel and materiel readiness;

-- A total force backed by a growing stockpile of war reserve munitions and spare parts; and

-- An active force capable of being rapidly expanded by the Reserve Components and prepared for sustained combat anywhere that conflict might threaten.

2. Naval Forces

a. *Introduction*

As an island nation and a senior partner in a global alliance system, the United States needs a strong Navy to support its forward defense strategy. In peacetime, the Navy helps maintain an American military presence in forward areas where we have vital interests to safeguard. These routine overseas deployments provide tangible evidence of our commitment to preserving international stability and security. In times of crisis, naval forces are often dispatched to trouble spots, both to support friends and allies and to deter aggression against them. Should deterrence fail, these forces would serve among the lead elements in our forward defense strategy, which emphasizes an active defense of Europe and the Eurasian littoral regions. In their wartime role, naval forces would be called on to protect friendly shipping from air or sea attacks, to deprive enemy forces of access to strategic areas, and to project power against targets at sea or on land.

These demands, coupled with the growing challenge posed by Soviet maritime forces, drive our naval force planning and dictate certain requirements that our forces must be able to meet. First, the forces must be large enough to support our overseas alliance system in peacetime and in war. But also, they must be ready and capable enough to operate effectively in forward areas, most likely against heavy Soviet opposition.

The Navy would have been hard-pressed to meet those challenges when this decade began. The fleet had experienced a sharp decline from almost 1,000 deployable battle force ships in the mid-1960s to less than 500 ships in the late 1970s, as vessels built during World War II were retired from service in large numbers. While the fleet was shrinking in size, modernization was slowed by the budget cutbacks that followed the Vietnam war. And, perhaps most important of all, the quality and readiness of our forces had fallen to dangerous lows, a result of pay caps and other cuts in readiness funding.

There was, however, no corresponding reduction in our defense commitments. Quite the contrary, turmoil in Southwest Asia led to an expansion of our overseas commitments, which today include ensuring the stability and security of the Persian Gulf region. As a result, the Navy was stretched too thin to meet all the requirements of a global defense strategy. The credibility of our deterrent capability was in question. In peacetime, our naval personnel were burdened too heavily by the cycle of overseas deployments. In wartime, they would have faced an unacceptably high degree of risk in performing their combat missions.

That these developments occurred at a time when the Soviets were strengthening their fleet only compounded our problems. That modernization effort continues today, with little indication of significantly abating over the long term.

Arrayed against our forces at sea is an increasingly sophisticated arsenal of weapons capable of being launched from bombers, submarines, and surface ships. These weapons pose a very real threat to our forces over large portions of the ocean's area.

Backfire bombers armed with long-range, supersonic antiship missiles can threaten surface targets in most of the maritime regions where our naval forces would operate in a major conflict. These include such vital areas as the Norwegian Sea, the North Atlantic, the eastern Mediterranean, the Indian Ocean, and the western Pacific. Improved bombers and missiles soon to come on line will extend the range and magnify the severity of this threat.

A Soviet force of about 275 attack submarines threatens our naval forces on a global scale. And the threat is growing as new submarines with improved capabilities continue to enter service. An increasing portion of the Soviet fleet is nuclear powered, which means the ships can stay on patrol for extended periods. And new submarine types -- such as the Oscar, Mike, Sierra, and Akula classes -- provide abundant evidence of the substantial improvement in the quality of Soviet submarines. These vessels' larger size enables them to carry more weapons, while their greater speed and diving depth, and quieter operations, make them more difficult to detect and engage.

In recent years, the Soviets have also introduced new generations of surface combatants, such as Kirov and Slava cruisers and Udaloy and Sovremennyy destroyers. These vessels carry powerful antiship missiles, compounding the threat faced by our surface units, particularly in a surprise-attack scenario. Toward the end of the decade, we expect the Soviets to introduce a new, much larger aircraft carrier. Though projected to be less capable than our own multimission aircraft carriers, this new system will enable the Soviets to conduct air-defense and air-strike operations in regions outside the reach of their land-based tactical aircraft.

Taken as a whole, these developments point unmistakably to the conclusion that we must continue to build the Navy's size and strength. The following section outlines the goals we have established toward that end.

(1) Program Goals for Naval Forces

As part of a general effort to rebuild the military strength needed to support our forward defense strategy, we have established six goals for our general purpose naval forces:

-- As an initial priority, to improve the Navy's readiness and sustainability;

-- As a means of meeting our global responsibilities, to build a 600-ship fleet by the end of the decade;

-- As a way of bolstering our offensive punch, to expand and improve our power projection forces, including aircraft carrier battle groups, battleships, amphibious assault ships, and cruise missile forces;

-- As a defense against air attacks, to improve our capability to intercept bombers and cruise missiles;

-- As a counter to advances in the Soviet submarine fleet, to upgrade our antisubmarine warfare capabilities; and

-- As a complement to the enlarged fleet, to modernize and expand our support and mine warfare forces.

We have made considerable progress toward those goals over the past five years. At the same time, we have had to delay or curtail efforts in many areas as a result of a series of reductions in projected funding. This chapter outlines our accomplishments to date, as well as the compromises necessitated by fiscal pressures.

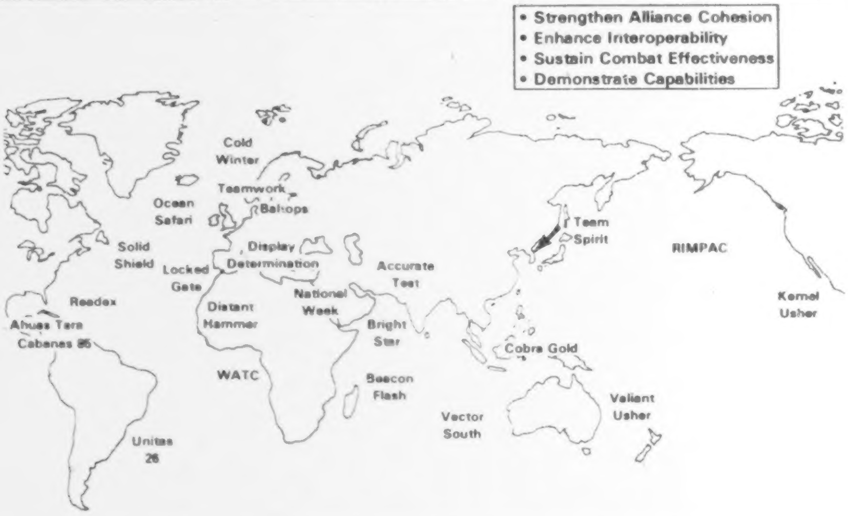
As part of the naval expansion plan, we are also increasing and modernizing our inventory of tactical aircraft. Those programs are described in the Tactical Air Forces chapter. Similarly, modernization programs for the ballistic missile submarine force are covered in the Nuclear Forces chapter, while sealift initiatives are described in the chapter on Mobilizing and Deploying the Forces.

(2) Readiness and Sustainability

Today, our naval forces are at a high level of readiness. This dramatic turnabout in just five short years has resulted largely from sharp improvements in manning. High-quality recruits are entering the Navy each year, while experienced personnel are choosing to stay. Last year, 66 percent of those eligible to reenlist elected to do so, up from 48 percent in 1980.

Each year, our forces engage in a series of highly realistic training exercises designed to maintain a high state of readiness. Many of these exercises are conducted in forward areas in coordination with other Services and allied navies, often in the presence of Soviet maritime forces. In 1985, the Navy conducted 110 major exercises, involving 41 allied countries. Highlights are shown in Chart III.B.2.1.

Chart III.B.2.1
Major U.S. Naval Exercises

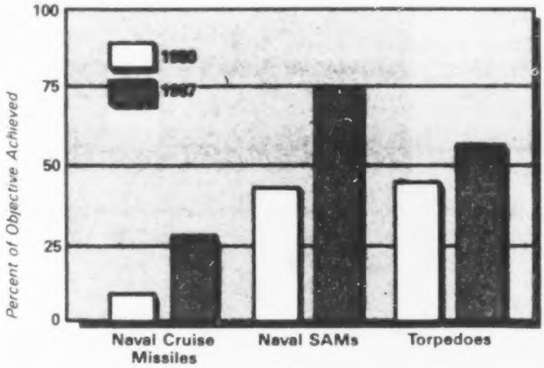

• Strengthen Alliance Cohesion
• Enhance Interoperability
• Sustain Combat Effectiveness
• Demonstrate Capabilities
Cold Winter
Teamwork
Baltops
Ocean Safari
Solid Shield
Locked Gate
Display Determination
Accurate Test
National Week
Readex
Ahuas Tara
Cabanas 85
Distant Hammer
Bright Star
WATC
Beacon Flash
Unitas 26
Vector South
Cobra Gold
Valiant Usher
Team Spirit
RIMPAC
Kernel Usher

In FY 1987, the operating tempo of the fleet will continue to reflect our emphasis on maintaining high force readiness. The budget supports 50.5 steaming days per quarter for the forward-deployed fleets (the Sixth and Seventh), with the "home" fleets (the Second and Third) steaming an average of 29 days per quarter. These rates will support a continued naval presence overseas, while permitting the home fleets adequate resources for training and operations. At the same time, the Navy will hold down operating costs by alternating battleship battle groups with aircraft carrier battle groups during periodic deployments to the western Pacific and by reducing the number of escorts deployed with carrier battle groups. In addition to providing financial savings, these initiatives will also ease the "at sea" burden on our naval personnel.

Sustainability, the "staying power" of the force, also improved substantially in recent years. Since 1980, the Navy's weapons inventories have climbed steadily, as shown in Chart III.B.2.2. The FY 1987 budget continues this trend, providing for an increase of more than 15 percent in Navy weapons' procurement funding over the amount approved last year.

Chart III.B.2.2.

The Navy Is Steadily Building Its Stocks of Weapons



(3) Force Structure

(a) Growth in Deployable Battle Forces

Over the past year, we have continued to expand the fleet. At the end of FY 1985, the deployable battle force stood at 542 ships, up from 479 at the end of FY 1980. As Table III.B.2.1 shows, we expect the force to grow to 554 ships by the end of FY 1986, and to 567 ships by the end of FY 1987. During the rest of the decade, the fleet will continue to expand as new ships are delivered faster than old ones are retired from service. By the end of FY 1989, the Navy should reach its goal of 600 deployable battle force ships.

Table III.B.2.1

Deployable Battle Forces[a] *(End Fiscal Year)*

	FY 1980	FY 1986	FY 1987
Ballistic Missile Submarines	40	38	39
Strategic Support Ships	8	6	6
Aircraft Carriers (Deployable)	13	13	14
Battleships	0	3	3
Cruisers	26	32	35
Destroyers	81	69	69
Frigates	71	113	115
Nuclear Attack Submarines	74	97	99
Diesel Attack Submarines	5	4	4
Patrol Combatants	3	6	6
Amphibious Ships	66	62	62
Mine Warfare Ships	3	3	5
Underway Replenishment Ships	48	54	57
Support Forces Ships	41	54	53
Total	**479**	**554**	**567**

[a] Table reflects data as of December 31, 1985.

(b) Specific Force Structure Goals

As part of its goal of achieving 600 deployable battle force ships, the Navy has set force structure goals for individual elements of the fleet. These are outlined in Chart III.B.2.3.

Chart III.B.2.3.

The Navy's Force Structure Goals

20-40	Ballistic Missile Submarines and Other Strategic Ships[a]
15	Deployable Aircraft Carriers
4	Reactivated Battleships
238	Principal Surface Combatants
100	Nuclear-Powered Attack Submarines
14	Mine Countermeasures Ships
75	Amphibious Ships (MAF-plus-MAB Lift)
6	Patrol Combatants
65	Underway Replenishment Ships
60-65	Support Ships and Other Auxiliaries
about 600	**Deployable Battle Force Ships**

[a] The force level goal for strategic submarines has not been determined; the eventual force level will depend on arms reduction talks and other factors.

By the end of the decade, many parts of this force structure will be in place. The Navy will have built a force of 15 deployable aircraft carriers, returned to service four modernized battleships, and expanded the attack submarine force to 100 ships. Other goals will not be achieved until the 1990s, however. For example, the amphibious lift objective will not be met until 1996, a two-year delay necessitated by funding reductions. Likewise, requirements for mine warfare and support ships will not be fulfilled until the early to mid-1990s, when the last of the ships in the FY 1987-91 program are delivered.

Given the large number of cruisers and destroyers scheduled for retirement in the 1990s, the Navy will also fall short of its goal of 238 principal surface combatants. These goals, and the challenges we face in meeting them, are discussed in greater detail in the section on FY 1987-91 Programs.

(c) A Growing Role for the Reserves

To man the expanded fleet within the constraints imposed on active-duty personnel levels, we are enlarging the role of the Naval Reserve Force (NRF). By the end of FY 1987, we will have transferred 19 modern frigates of the FFG-7 and FF-1052 classes from the active force to the NRF, building steadily to a total of 26 reserve frigates. The LAMPS MK I antisubmarine helicopters deployed with these vessels have been assigned to reserve squadrons. In addition, the reserves operate 13 of our 37 squadrons of P-3 maritime patrol aircraft. In FY 1987, the first of two reserve squadrons of airborne mine countermeasures helicopters will be established. Eventually, all of our new MCM-1 and MSH-1 mine countermeasures ships will be operated by the NRF, as well as an increasing number of amphibious assault and support ships. To keep these forces in a high state of readiness, the FY 1987 budget funds a steaming rate of 21 days per quarter for the reserve ships, up from less than 15 days last year. The growing contribution of the reserves to the manning of the 600-ship Navy is illustrated in Chart III.B.2.4.

Chart III.B.2.4.
The Growing Contribution of Naval Reserves

	FY 1980	FY 1985	FY 1992
Deployable Battle Force Ships			
Destroyers	1	1	1
Frigates	0	11	26
Amphibious Ships	3	2	5
Mine Ships	0	0	14
Support Ships	2	0	5
Total*	**6**	**14**	**51**
Aircraft Squadrons			
Maritime Patrol Aircraft	13	13	13
ASW Helicopters	4	5	5
Minesweeping Helicopters	0	0	2
Total	**17**	**18**	**20**

*Does not include other reserve ships excluded from deployable battle forces category

b. FY 1987-91 Programs

The following sections describe the purposes, schedules, and funding requirements of the naval programs we are proposing for FY 1987 through FY 1991. The programs are divided into four functional areas:

-- Power projection forces;

-- Antisubmarine warfare forces;

-- Antiair warfare forces; and

-- Mine warfare and support forces.

Though functionally distinct in some respects, these forces operate together as an integrated whole, each contributing to the successful accomplishment of the Navy's missions. For this reason, we must maintain a proper balance among our funding priorities. The FY 1987-91 program has been carefully structured with that objective in mind, at the same time taking into account the funding reductions the Defense Department has had to absorb.

(1) Power Projection Forces

A primary objective of the naval expansion program has been to strengthen the power projection forces. These are the forces that would seize the initiative in wartime by carrying the battle to the enemy. In this role, they would be called on to reinforce key areas where our forces do not maintain a continuous presence in peacetime. They would also conduct counteroffensive operations against the enemy's areas of greatest vulnerability. In peacetime, their continuous forward deployment provides a visible demonstration of this capability, thus providing a vigorous deterrent to aggression.

Our specific objectives for the power projection forces remain unchanged from previous years. We are expanding the aircraft carrier force to 15 deployable carriers. We are refurbishing and returning to service our four Iowa-class battleships. We are expanding and upgrading the amphibious fleet. And we are arming our surface and subsurface forces with Tomahawk and Harpoon cruise missiles, giving them a capability to strike distant targets at sea and on land.

(a) Aircraft Carrier Forces

Carrier battle groups, perhaps the most visible symbol of our maritime capability, form the core of today's Navy. Our multimission aircraft carriers -- operating an array of advanced combat aircraft and accompanied by a potent mix of surface combatants, attack submarines, and mobile logistic support ships -- can execute the full range of naval missions. They can strike targets at sea and on land. They can establish air defense umbrellas in the skies above naval task forces. And they can undertake operations against enemy submarines.

The Navy now has 13 deployable aircraft carriers. An additional carrier is undergoing long-term renovation and thus is unavailable for operations, while a smaller unit supports pilot-training activities. To meet our global maritime responsibilities, we will expand the deployable force to 15 carriers by the end of the decade. Thanks to congressional approval of two new carriers in FY 1983, that growth will be achieved at minimum cost to the taxpayers. Our fourteenth carrier, the USS THEODORE ROOSEVELT (CVN-71), will join the fleet this fall -- nearly one-and-a-half years ahead of schedule. At the end of the decade, the Navy will reach its goal of 15 deployable carriers when it takes delivery of the USS ABRAHAM LINCOLN (CVN-72), the first of the two new carriers authorized four years ago. The second carrier in the multiship program, the USS GEORGE WASHINGTON (CVN-73), will be delivered in early FY 1992, permitting replacement of the USS CORAL SEA, which will become the Navy's training carrier, replacing the USS LEXINGTON.

Looking ahead, the Navy will have to order replacements for some of its other carriers in the early 1990s if it is to sustain a force of 15 into the next century. Specifically, it will need to replace the USS MIDWAY, a vessel built during World War II but extensively modernized over the years, as well as its other conventionally powered carriers dating from the 1950s and 1960s.

In the meantime, the Navy is prolonging the life of its conventionally powered aircraft carriers through the Service Life Extension Program (SLEP). Under this program, carriers are removed from the deployable force for two to three years to undergo a major renovation that extends their service lives at least 15 years. Two ships have already completed this process, and a third is now being refurbished. The fourth renovation -- the USS KITTY HAWK -- will be funded in FY 1988.

(b) Battleship Forces

Our Iowa-class battleships, now being refurbished and armed with long-range Tomahawk and Harpoon cruise missiles, are a potent supplement to the carrier force. In a war, they could be used for power projection operations, or to provide naval gunfire support for amphibious operations. In peacetime, they help maintain a maritime presence in foreign waters we routinely patrol. This year, for example, we plan to alternate a battleship battle group with a carrier battle group during periodic deployments in the western Pacific.

I am pleased to report that we are nearing the successful completion of this important element of the naval expansion program. Two battleships, the USS NEW JERSEY and USS IOWA, have already been refurbished and returned to service. The third ship, the USS MISSOURI, is undergoing its renovation and will be recommissioned in April. The fourth and last battleship, the USS WISCONSIN, will be reactivated in FY 1986 with funds saved from other ship construction programs. Its delivery is anticipated in late 1988.

(c) Amphibious Assault Forces

Amphibious assault forces give us a means of rapidly deploying Marine air-ground task forces to distant trouble spots with the equipment to fight their way across hostile coasts. In wartime, these forces would be used to establish lodgements ashore in support of naval or land campaigns, to secure flank areas, or to seize the initiative in counteroffensive operations. In peacetime, they maintain a continuous presence in areas of vital interest or potential turmoil. Often during emergencies, they have been called on to protect American citizens or to come to the aid of friendly nations -- Grenada being the most recent example.

We have begun a major and long-needed modernization and expansion of the amphibious assault force. The goal of the expansion is to provide lift for the assault echelons of a Marine Amphibious Force (MAF) and a Marine Amphibious Brigade (MAB). This will require an increase of roughly one-third over today's capacity, which could accommodate a MAF. Three new classes of ships -- the LHD-1 and the LSD-41 now under construction, and a third class now being designed -- support that effort.

The force modernization is linked to a new operational concept the Navy and the Marine Corps are developing. That concept calls for launching assaults from points over the horizon, where the opportunity for surprise is greater and the vulnerability of our ships is lower. This will require buying new equipment for transporting Marine forces from ship to shore. Key programs providing such ship-to-shore mobility include the Landing Craft, Air Cushioned (LCAC) and the MV-22 tilt-rotor aircraft being developed in the JVX program (described in the Land Forces chapter).

Unfortunately, fiscal pressures have required reductions in our amphibious shipbuilding programs. This will delay completion of the expansion and modernization goal by two years, to 1996.

Chart III.B.2.5

Amphibious Modernization and Expansion Plan

	Troop Berths	Vehicle Space (square feet)	Cargo Space (cubic feet)	Helicopter Spots	LCAC Spots
MAF + MAB Lift Requirements	50,000	1,040,000	2,490,000	633	90
Existing Fleet After Projected Retirements	38,000	750,000	1,670,000	423	31
5 LHA-1	8,500	125,000	544,000	190	5
7 LPH-2	11,000	23,000	279,000	189	–
11 LPD-4	8,500	124,000	430,000	44	11
5 LSD-36	1,500	29,000	7,000	–	15
5 LKA-113	1,000	167,000	343,000	–	–
20 LST-1179	7,000	277,000	65,000	–	–
2 LCC-19	500	5,000	2,000	–	–
New Ships Needed to Meet Requirements	15,600	280,000	785,000	210	59
5 LHD-1	9,300	100,000	505,000	210	15
8 LSD-41	3,600	100,000	40,000	–	32
6 LSD Variant	2,700	80,000	240,000	–	12

LHD-1 -- As shown in Chart III.B.2.5, the LHD-1 multipurpose amphibious assault ship will provide the largest share of the increased lift needed to meet the MAF-plus-MAB goal. A 40,000-ton ship, the LHD-1 will provide berthing for nearly 2,000 Marines, as well as space for assault vehicles and cargo. The ship is designed to carry 42 helicopters and three LCACS, vital components of the new over-the-horizon assault concept. The lead ship in the program, the USS WASP, is now under construction, and the Congress has authorized a competitive multiyear procurement initiative for the next three ships, to be purchased between FY 1986 and FY 1989. Unfortunately, fiscal constraints have forced us to delay the fifth ship's authorization from FY 1990 to FY 1991, with delivery projected for FY 1996, thereby causing a delay in meeting the helicopter-lift requirement.

LSD-41 Cargo Variant -- Last year, the Congress authorized the last two ships in the LSD-41 program. The eight ships of this class will be used to transport and support LCACs in an amphibious landing. To provide the necessary cargo capacity for meeting the MAF-plus-MAB lift goal, we plan to switch production to a variant design. Under current plans, the cargo variant will have essentially the same hull and engineering plant as the LSD-41, but it will carry more cargo in exchange for fewer LCAC spaces. Construction will begin in FY 1988, with a total of four ships funded in the five-year program, down from six ships in last year's five-year plan. This reduction will postpone meeting the overall cargo requirement.

LCAC -- The LCAC is the key to the new assault concept being developed for the future. It is designed to carry the combat and logistical vehicles of a Marine landing force from ship to shore at speeds in excess of 40 knots. To support the landing requirements of a MAF and a MAB, we plan to buy at least 90 of these craft. A total of 33 have been authorized to date, the first of which was delivered for operational testing last year. The system fully met its performance specifications during those tests, but it did experience some reliability problems. These are now being corrected, and further testing is scheduled over the next few months. In the meantime, we have postponed procurement of additional craft until FY 1988, to allow time to correct the reliability problems and to eliminate production backlogs. A steady rate of nine purchases per year is projected for FY 1988 to FY 1991.

(d) Cruise Missile Forces

The Tomahawk and Harpoon cruise missile programs represent a major effort to distribute offensive striking power more widely throughout the fleet. The Harpoon, having a shorter range than the Tomahawk, is designed primarily for antiship strikes but is being given a land-attack capability. The Tomahawk, now entering the fleet in substantial numbers, has the range to reach both ships and shore targets beyond the horizon.

Tomahawk -- Tomahawk missiles will be carried aboard a wide variety of naval vessels, including battleships, cruisers, destroyers, and attack submarines. Continued testing of the Tomahawk system during the past year has given us increased confidence in its technical maturity, allowing us to continue increasing the procurement rate. The FY 1987 budget includes funds for 324 missiles, to be purchased competitively under our new dual-source procurement program.

Harpoon -- The Harpoon antiship missile system is deployed on most of our surface combatants and attack submarines, and can also be launched by P-3 patrol aircraft, A-6 attack aircraft, and F/A-18 strike-fighters. Future plans call for S-3 antisubmarine aircraft to be modified to carry the missile as well. The FY 1987 budget funds 94 additional missiles.

	FY 1985 Actual Funding	FY 1986 Planned Funding	FY 1987 Proposed Funding	FY 1988 Proposed for Authorization
CV Service Life Extension Program				
Procurement:				
Quantity	1	—	—	1
$ Millions	714.5	52.0	83.5	544.8
Battleship Reactivations				
Procurement:				
Quantity	—	1	—	—
$ Millions	—	469.0	—	—
LHD-1				
Procurement:				
Quantity	—	1	—	1
$ Millions	39.2	1,268.3	232.0	1,046.3
LSD-41				
Procurement:				
Quantity	2	2	—	1
$ Millions	476.6	373.4	—	311.2

	FY 1985 Actual Funding	FY 1986 Planned Funding	FY 1987 Proposed Funding	FY 1988 Proposed for Authorization
LCAC				
Procurement				
Quantity	9	12	—	9
$ Millions	230.1	307.0	—	207.9
Tomahawk Missiles				
Procurement				
Quantity	180	249	224	410
$ Millions	581.1	767.8	835.7	958.4
Harpoon Missiles				
Procurement				
Quantity	439	370	94	204
$ Millions	350.4	306.2	153.8	216.2

(2) Antiair Warfare (AAW) Programs

Soviet tactical missiles pose a serious threat to our naval forces, sea lines of communications, and forward bases. These highly sophisticated weapons are being produced in several versions, designed for launch from bombers, submarines, and surface ships. Because they are difficult to intercept, the missiles can best be countered by detecting and engaging the aircraft and vessels that carry them. Each region of potential conflict has unique geographical characteristics that influence our choice of a defense. Thus, we have adopted a regional approach to maritime antiair warfare, designed to exploit Soviet geographical constraints to the advantage of our air defenses.

Because the air threat to our maritime forces is so severe, we would plan to conduct a "layered" defense, in which enemy forces would be attacked in a series of engagements by different types of weapons systems. This maximizes the protection afforded to our forces and makes it more difficult for the enemy to overcome any one element of our defensive screen. Thus, while our longer-range "regional" and "outer-zone" defenses provide a high degree of leverage to our antiair warfare forces, we must also maintain strong "local" defenses in the immediate vicinity of naval task forces. We have attempted to maintain a careful balance among these requirements, as described in the following sections.

(a) Wide-Area Surveillance and Control

By giving forces an opportunity to position themselves to engage the enemy, timely warning of air strikes maximizes the forces' effectiveness in exposed theaters. This warning can come from any combination of Navy, Air Force, or national surveillance systems. For example, we plan to use Air Force airborne warning and control aircraft to patrol air corridors in such high-priority regions as the North Atlantic.

The tactical Relocatable Over-the-Horizon Radar (ROTHR) system, now under development, will substantially increase the amount of warning time available to our maritime forces. The radars will have a detection range of up to 1,600 miles, and will be deployed in regions where they can scan likely bomber-attack corridors, as well as surface-ship approaches. Being "relocatable" to prepared sites, the system will also provide a capability to establish wide-area coverage in regions not routinely monitored.

To provide our commanders with the right information at the right time, we need a comprehensive, integrated command and control network as good as our surveillance capabilities. Several programs now under way will give battle groups at sea the kind of command, control, communications, and intelligence (C^3I) support they need for an effective defense against the Soviet air threat. These programs are described in detail in the Command, Control, Communications, and Intelligence chapter.

(b) Broad-Area Interception

Interception of air raids at longer ranges maximizes enemy attrition and reduces the number of missiles that are able to reach our local defenses. Given proper warning, a land- or carrier-based team of early warning aircraft, fighter-interceptors, and electronic warfare aircraft can detect and intercept approaching bombers before they come within missile-launch range. To supplement our aircraft systems, the Outer Air Battle Missile program is investigating the feasibility of developing a ship-based antiaircraft missile that could intercept enemy bombers at long ranges. Such a capability would permit AAW surface combatants to contribute to broad-area air defense operations.

(c) Antiair Warfare Ships

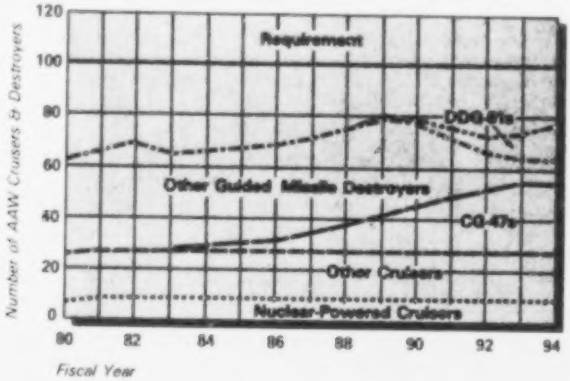
Our long-range weapons will never guarantee a "leak proof" antiair net, so we must also maintain strong local defenses. These systems protect our most critical naval forces from missiles that survive our broad-area defenses or are launched at short ranges from undetected submarines. Two new classes of AAW ships -- the CG-47 guided missile cruiser and DDG-51 guided missile destroyer -- are bolstering the self-defense capabilities of our naval battle groups. Both ships feature the Aegis radar and missile combat system, which incorporates advanced technologies for detecting and intercepting high-speed cruise missiles at sea. The system's powerful phased-array radar can detect incoming missiles at long ranges, and its automated fire-control equipment can track and engage many targets simultaneously, even under heavy jamming conditions. These capabilities are substantially improving the fleet's defenses against the kind of coordinated anti-ship missile saturation attacks we would expect the Soviets to attempt in an engagement at sea.

CG-47 -- The Congress has authorized 19 CG-47 Ticonderoga-class cruisers to date, four of which have already joined the fleet. The five-year shipbuilding plan funds eight more, at a reduced rate of two per year. This will complete the program in FY 1990, one year later than we had projected last year.

DDG-51 -- The lead ship in the 29-ship DDG-51 program, the USS ARLEIGH BURKE, was authorized in FY 1985 and is now under contract. This year, we are requesting funding for the next three ships, which will be procured under a competitively awarded contract. Fiscal constraints have, however, forced us to delay moving to a five-ship-per-year procurement rate until FY 1991, which will only aggravate the shortage of AAW ships in the 1990s (see Chart III.B.2.6). A follow-on class of AAW ships will be introduced upon completion of the DDG-51 program in the mid-1990s.

Chart III.B.2.6

Continuing Shortages of AAW Cruisers and Destroyers



(d) Antiair Warfare (AAW) Weapon Systems

To improve our area air defense capabilities, we are continuing to build our inventories of surface-to-air Standard Missiles (SM-2s). We plan to buy 1,194 of these missiles in FY 1987. A "Block 2" version now in production promises even better intercept capabilities against the sophisticated high-altitude antiship missiles the Soviets might target against our carrier force in a war. Over the next five years, we also plan to add a new fuse to the system in order to improve its effectiveness against sea-skimming antiship missiles.

	FY 1985 Actual Funding	FY 1986 Planned Funding	FY 1987 Proposed Funding	FY 1988 Proposed for Authorization
ROTHR				
Development:				
$ Millions	31.6	52.6	41.1	12.9
Procurement:				
Quantity	—	—	—	—
$ Millions	—	—	2.3	165.0
CG-47 Cruisers				
Development:				
$ Millions	35.1	34.7	38.4	32.4
Procurement:				
Quantity	3	3	2	2
$ Millions	2,752.9	2,612.3	1,924.3	1,902.6

	FY 1985 Actual Funding	FY 1986 Planned Funding	FY 1987 Proposed Funding	FY 1988 Proposed for Authorization
DDG-51				
Development				
$ Millions	118.3	87.0	96.5	84.6
Procurement				
Quantity	1	—	3	3
$ Millions	976.0	74.0	2,527.8	2,354.6
Standard Missile				
Development				
$ Millions	31.6	46.5	46.1	75.6
Procurement				
Quantity	1,384	1,316	1,194	1,250
$ Millions	754.0	872.9	747.6	761.5

(3) Antisubmarine Warfare (ASW) Forces

The preeminent role given attack submarines in the Soviet fleet requires that we pay special attention to developing effective ways to counter this threat. The large size of the Soviet submarine force has always been a problem for our antisubmarine forces, but the dramatic qualitative improvements that we have witnessed in the Soviet force in recent years demand that we redouble our efforts to upgrade our ASW capabilities. Indeed, the Navy is now initiating new approaches to coping with the challenge presented by the Soviet undersea force.

Conceptually, our basic strategy for combating the Soviet submarine threat remains unchanged. We still see a need for a layered offensive strategy that both maximizes enemy attrition and provides a high level of protection to our own forces. The best means of neutralizing enemy submarines is to engage them in forward areas and barriers -- before they come within range of attacking our forces. The compelling logic of this approach has only increased with the fielding of new Soviet systems that are more deadly and more difficult to counter. For long-term offensive operations, we rely primarily on attack submarines and ASW patrol aircraft supported by long-range surveillance systems. Even under the most favorable circumstances, however, some enemy submarines would escape our forward sweeps. These would have to contend with the layered defensive screen surrounding our naval task forces. Within this defensive ring, we rely upon formations of surface combatants equipped with advanced sonar systems, torpedo-armed antisubmarine helicopters, and carrier-based antisubmarine aircraft, as well as screens of attack submarines operating in the direct-support role.

(a) Antisubmarine Warfare (ASW) Surveillance Systems

The ability to locate enemy submarines within broad ocean areas is perhaps the single most important element of an effective antisubmarine warfare system. And it is in this area that the new Soviet submarines present the greatest challenge. To maintain our ASW capabilities, we must invest in new and improved systems for monitoring Soviet submarines.

One of our most important ongoing programs in this area is the TAGOS Surveillance Towed-Array Sonar System (SURTASS). By the end of FY 1985, the first six TAGOS ships had joined the fleet, and they have proved to be highly effective during initial operations. Once fully integrated into the fleet, these ships will be crucial both for extending coverage to ocean areas that are not routinely monitored by fixed systems and for providing backup coverage in the event that other systems are incapacitated. The Congress has funded 16 TAGOS ships through FY 1986, and we are projecting construction of ten more over the next five years, including three in FY 1987.

(b) Attack Submarines

In any major naval campaign, our nuclear-powered attack submarines would carry the brunt of the initial engagements. Early in a war, they would move rapidly into far-forward positions, including waters where the Soviet navy would be operating in strength and where little assistance from friendly forces could be expected. Possible areas of conflict might include the ice-covered Arctic Ocean, where the demands on our submarine units would be great. Operating under these conditions would place a premium on stealth, quick and accurate weapons delivery, and firepower -- all areas in which the Soviets are fast encroaching on our long-held advantages. To maintain our technological edge in undersea warfare, we have structured our attack submarine programs to give maximum emphasis to these requirements.

SSN-688 -- In the near term, we are making evolutionary improvements in the basic design of the SSN-688 Los Angeles-class submarine, which is rapidly becoming the mainstay of our attack submarine force. To provide increased stealth, we are adding new sound-quieting features. To improve the speed and accuracy of weapons delivery, we will install the AN/BSY-1 Advanced Combat System on all new SSN-688s, starting with the SSN-751, which is now under construction. (The AN/BSY-1 program, which has undergone restructuring during the past year, will maintain our force's edge in undersea detection and targeting.) To increase firepower, we are installing vertical launch systems aboard all new SSN-688s, thereby providing 12 additional weapon spaces for submarine-launched missiles. And to allow the SSN-688 class to engage in Arctic operations, we are giving the submarines a greater under-ice capability.

Of the 52 SSN-688s approved through FY 1986, 33 have been delivered and are operating with the fleet today. The five-year program projects construction of 15 additional units, including four in FY 1987. This represents a slight reduction from last year's plan, but it will sustain a force of 100 attack submarines through the 1990s. Even a force of that size will remain seriously outnumbered by the Soviet submarine force, making it imperative that we retain a solid lead in performance.

SSN-21 -- Maintaining our technological superiority into the next century will require construction of an entirely new class of submarines in the 1990s. To that end, we have moved ahead with design work on a new attack submarine, designated SSN-21 (SEAWOLF) for its key role in maintaining our naval power in the 21st century. A priority objective of this program is to make improvements in sound quieting in order to preserve our acoustic advantage over a Soviet submarine force making rapid advances in this same area. Also, we are designing the SSN-21 to carry a much larger number of weapons than existing classes and to operate under ice more effectively. In addition, the new submarine will incorporate an advanced combat system, built upon the advances made in the AN/BSY-1 program. Designed to maximize speed and accuracy in the detection and targeting of enemy submarines, this capability is vital if our forces are to be successful in undersea engagements.

ADCAP Torpedoes -- The MK-48 ADCAP torpedo will give the attack submarine force a means of countering the faster, quieter, and deeper-diving submarines now entering service with the Soviet fleet. An upgraded version of earlier MK-48 models, the ADCAP ("advanced capability") is also designed to counter other advances in Soviet submarine designs and tactics. We are requesting funds for 227 torpedoes in FY 1987, which will support establishment of a second source for future competitive procurement.

(c) Surface Ship ASW Systems

To provide a strong antisubmarine screen for the future, we must also upgrade the ASW capabilities of our surface combatants. To that end, we are buying new sonars, antisubmarine helicopters, and weapons for our modern cruisers, destroyers, and frigates.

Tactical Towed-Array Sonar (TACTAS) -- The long-range performance of the TACTAS improves our surface combatants' ability to detect and engage Soviet submarines before they close to weapons-launch range. This capability is especially crucial in light of the increasing range and lethality of Soviet antiship missiles and torpedoes. The AN/SQR-18 towed-array system is being deployed aboard all 46 FF-1052 frigates and all of the Naval Reserve's FFG-7s. The more advanced AN/SQR-19, now entering production, will be installed as part of the SQQ-89 Surface ASW Combat System on our cruisers and destroyers, as well as on the FFG-7 frigates operated by the active fleet. The design of both systems could facilitate future upgrades that may be needed to respond to advances in Soviet capabilities.

ASW Helicopters -- The SH-60B LAMPS MK III antisubmarine helicopter system, also known as Seahawk, will be based aboard almost 100 of our most modern surface combatants, allowing them to prosecute long-range submarine contacts provided by TACTAS. A total of 114 of these helicopters have been authorized to date. Deliveries to the fleet have already begun, and initial deployments have confirmed that the Seahawk will be a highly capable and reliable aircraft. In FY 1987, the Navy will begin procuring a variant design, designated SH-60F, to replace its aging force of carrier-based SH-3s. Under the new fiscal constraints, the Navy will cap the combined production of the two SH-60 models at 24 per year. The current plan emphasizes procurement of the "F" model in the near term, leaving funds for only 17 SH-60Bs in FY 1987, followed by six per year through FY 1990.

MK-50 Torpedo -- The FY 1987 budget contains initial procurement funds for the MK-50 torpedo, which is nearing the end of a very successful development program. This new antisubmarine weapon is designed for launch from surface ships and their antisubmarine helicopters, as well as from maritime patrol aircraft. Relative to its predecessors, the MK-50 will provide significant improvements in speed, diving depth, accuracy, and lethality. Until the system is ready for high-rate production, we will continue buying upgraded MK-46 torpedoes under a multiyear contract.

(d) Maritime Patrol Aircraft

Maritime patrol aircraft contribute to our ASW capabilities through their role in long-range offensive operations and barrier patrols. The Navy maintains a force of 333 P-3 maritime patrol aircraft in 37 squadrons, 35 percent of which are operated by the Naval Reserve. The P-3C, of which some 260 have been procured through FY 1986, is the backbone of the force, while earlier "A" and "B" models round out the inventory. The five-year program funds 45 P-3C aircraft at a steady rate of nine per year. The Navy has also initiated a competitive development program for a "D" model P-3 aircraft incorporating improved avionics and engines.

	FY 1985 Actual Funding	FY 1986 Planned Funding	FY 1987 Proposed Funding	FY 1988 Proposed for Authorization
TAGOS SURTASS Ships				
Development:				
$ Millions	3.7	2.0	5.9	6.4
Procurement:				
Quantity	2	2	3	3
$ Millions	99.7	113.9	148.1	193.9
SSN-688				
Procurement:				
Quantity	4	4	4	3
$ Millions	2,665.0	2,540.9	2,332.6	2,046.9
SSN-21				
Development:				
$ Millions	257.9	356.0	256.7	224.9
Procurement:				
Quantity	—	—	—	—
$ Millions	—	—	454.3	160.2
MK-48 ADCAP Torpedo				
Development:				
$ Millions	125.9	62.6	37.9	42.7
Procurement:				
Quantity	28	123	227	296
$ Millions	113.7	409.5	530.9	564.3
SH-60B Helicopters				
Development:				
$ Millions	11.3	14.0	19.7	10.6
Procurement:				
Quantity	24	18	17	6
$ Millions	421.3	292.9	234.8	158.5
MK-50 Torpedo				
Development:				
$ Millions	145.5	157.6	153.2	91.5
Procurement:				
Quantity	—	—	84	204
$ Millions	—	—	118.7	356.7
MK-46 Torpedo				
Procurement:				
Quantity	1,565	500	493	500
$ Millions	231.5	122.0	100.7	87.7
P-3C Aircraft				
Development:				
$ Millions	24.9	33.1	96.9	82.4
Procurement:				
Quantity	9	9	9	9
$ Millions	415.8	418.5	414.2	321.6

(4) Support and Mine Warfare Forces

The expansion of the fleet has brought with it an increased requirement for mobile logistic support ships and mine warfare ships. At the same time, our existing forces are aging and in need of replacement with more up-to-date equipment. To meet these combined demands, the FY 1987-91 program carries forward a general modernization and expansion of these often-overlooked forces.

(a) Support Forces

Multiproduct Station Ships -- The FY 1987 budget funds the lead ship in the new AOE-6 class of multiproduct station ships. These ships support carrier battle groups in sustained operations at sea. One is needed for each battle group to keep it supplied with food, fuel, ammunition, and other provisions. To support the expanded force of 15 carriers, we must add four new station ships to the eleven we now have. All four will be purchased over the next five years, though the last ship will not join the fleet until the mid-1990s.

Fleet Oilers -- The FY 1987-91 shipbuilding program continues construction of TAO-187 fleet oilers at a rate of two per year. These ships, operated by the Military Sealift Command, shuttle fuel from forward bases to battle groups at sea. The new ships are needed to replace the 35-to-40-year-old vessels now performing this service.

(b) Mine Warfare Forces

The Soviet Union has long maintained the world's largest and most capable inventory of naval mines. Though we would look to our allies to perform the bulk of mine clearing operations in a major conflict, we still must maintain a capability to clear our home ports and to sweep certain areas overseas where allied mine warfare forces might not be available. For this reason, the Navy is revitalizing its mine warfare capabilities, in the process replacing the 1950s-vintage minesweepers it now operates.

MCM-1 -- The MCM-1 mine countermeasures ship will improve the Navy's minesweeping capabilities and provide our forces with a system for hunting and neutralizing advanced mines that cannot be countered by sweeping techniques. Eleven MCM-1 ships have been approved to date, and the final three will be requested in the FY 1988 budget -- a one-year delay necessitated by production problems and fiscal constraints. We expect to receive the lead ship, the USS AVENGER, later this year.

MSH-1 -- A second new type of mine warfare ship, the MSH-1 Cardinal-class mine sweeper-hunter, will augment the MCM during initial harbor breakout operations. The MSH-1 is equipped with an advanced mine-hunting system similar to the MCM's, but it is smaller and less expensive. The Congress has already authorized the first five of these ships. The FY 1987-91 program funds twelve more, including four in FY 1987.

MH-53E -- The MH-53E will upgrade and expand our existing force of mine countermeasures helicopters. Compared with the RH-53Ds now flying this mission, the MH-53E will provide a much-needed boost in flight endurance and capacity to tow mine-clearing devices. A total of 13 MH-53Es have been funded to date. The five-year plan projects procurement of 23 more, including four in FY 1987. (The CH-53E helicopter, assembled on the same production line, is discussed in the Land Forces Chapter.)

	FY 1985 Actual Funding	FY 1986 Planned Funding	FY 1987 Proposed Funding	FY 1988 Proposed for Authorization
AOE-6 Multi-Product Ship				
Development:				
$ Millions	7.8	4.7	6.7	3.8
Procurement:				
Quantity	—	—	1	—
$ Millions	—	—	612.7	—
TAO-187 Oilers				
Development:				
$ Millions	0.3	0.1	—	—
Procurement:				
Quantity	3	2	2	2
$ Millions	463.0	266.3	275.5	319.9
MCM-1 Ships				
Development:				
$ Millions	0.9	0.5	—	—
Procurement:				
Quantity	4	2	—	3
$ Millions	344.5	197.2	—	272.2
MSH-1 Ships				
Development:				
$ Millions	2.1	1.0	—	—
Procurement:				
Quantity	—	4	4	4
$ Millions	—	184.5	196.1	181.8
MH-53E Helicopters				
Development:				
$ Millions	15.0	1.2	3.5	8.7
Procurement:				
Quantity	2	10	4	8
$ Millions[a]	76.7	192.6	79.2	137.4

[a] The FY 1985 figure includes a part of the start-up costs for the CH-53E MH-53E multiyear contract.

c. Conclusion

Over the past five years, we have grown steadily closer to our goal of a modern 600-ship Navy, ready for combat and able to sustain itself in battle. As the fleet grows, it is also gaining larger numbers of highly capable ships, such as the CG-47 cruiser and the improved SSN-688 submarine. The quality of the people manning these units has also improved, and our stocks of naval weapons have expanded.

But there are still difficult challenges ahead. Construction of modern surface combatants has slowed, with the result that the Navy will not achieve the desired number and mix of ships required to meet its wartime requirements. The expansion plan for the amphibious force has been significantly delayed over the past year. Likewise, the Navy will be delayed in achieving its goals for support and mine warfare forces until the mid-1990s.

Table III.B.2.2.

FY 1987-91 Shipbuilding Program

		FY 1987	FY 1988	FY 1989	FY 1990	FY 1991	FY 87-91 Five-Year Total
New Construction							
Trident	(Ballistic Missile Submarine)	1	1	1	1	1	5
SSN-688	(Attack Submarine)	4	3	3	4	1	15
SSN-21	(Attack Submarine)	—	—	1	—	2	3
CG-47	(Guided Missile Cruiser)	2	2	2	2	—	8
DDG-51	(Guided Missile Destroyer)	3	3	3	3	5	17
LHD-1	(Amphibious Ship)	—	1	1	—	1	3
LSD-41	(Landing Ship Dock-Cargo Variant)	—	1	1	1	1	4
MCM-1	(Mine Countermeasure Ship)	—	3	—	—	—	3
MSH-1	(Mine Hunter-Sweeper)	4	4	4	—	—	12
AOE-1	(Multipurpose Stores Ship)	1	—	1	1	1	4
AE-36	(Ammunition Ship)	—	1	—	2	2	5
ARS	(Salvage Ship)	—	—	—	—	1	1
TAO-187	(Oiler)	2	2	2	2	2	10
TAGOS	(Surveillance Ship)	3	3	2	2	—	10
AGX	(Research Ship)	1	—	—	2	3	6
Total		**21**	**24**	**21**	**20**	**20**	**106**
Conversions/SLEPs/Reactivations							
CV	(Aircraft Carrier) SLEP	—	1	—	—	1	2
LPD-4	(Landing Platform Ship) SLEP	—	—	1	3	3	7
AO	(Oiler) Conversion	1	1	1	2	—	5
TACS	(Crane Ship) Conversion	2	2	2	—	—	6
Total		**3**	**4**	**4**	**5**	**4**	**20**

3. Tactical Air Forces

a. Introduction

Our tactical air forces are designed to deploy and operate on a global scale either from land bases or aircraft carriers. These forces must be capable of sustaining combat operations until a conflict has been resolved. One of their most important wartime duties would be to gain and maintain control of the skies, thereby allowing our ground, naval, and air forces to operate with minimal interference from enemy air attack. They also would be used to attack ground targets inside hostile territory as well as to support friendly forces in close combat with the enemy. These missions, together with the nature of the threat we face, largely determine our tactical air force needs.

Our major concerns relate to the significant improvements in Soviet aircraft and weapon systems. Throughout the postwar period, the U.S. tactical fighter force has enjoyed a significant qualitative advantage over the much larger Soviet force. Current-production U.S. fighters -- Air Force F-15s and F-16s and Navy F-14s and F/A-18s -- have been rated vastly superior to their principal adversaries, the Soviet-built MiG-21/Fishbed and MiG-23/Flogger. But an entirely new generation of Soviet aircraft now threatens to reduce this traditional area of U.S. superiority. Over the past few years, the Soviets have begun deploying an impressive new fighter -- the MiG-29/Fulcrum -- with their tactical aviation regiments. The MiG-29 is similar in size to our F/A-18 and is estimated to be at least comparable to our current-generation fighters in aerodynamic performance. That aircraft will soon be joined in the inventory by a second new Soviet fighter, the Su-27/Flanker. A larger aircraft than the MiG-29, the Su-27 is similar in size to our F-15 and is estimated to have comparable capabilities. Aircrews began training in earnest last year, and we expect the plane to reach operational units sometime this year and to be fielded in air defense units later in the decade. Both aircraft will carry the new AA-10 missile, an advanced air-to-air weapon that, in combination with a new advanced air intercept radar, will give the Soviets their first look-down/shoot-down capability.

These new aircraft are expected to provide the Soviets rough equivalency in fighter aircraft effectiveness by the early 1990s. Of course, the outcome of any air battle with the Soviets would be decided by a whole host of factors above and beyond aircraft effectiveness. Other key determinants could include aircrew proficiency, command and control support, situation awareness (intelligence gathering and dissemination), air base survivability, logistics support, and spares and munitions sustainability -- all areas in which the Soviets still have important shortcomings. Nonetheless, the introduction of vastly more capable aircraft into the Soviet inventory has dramatically increased the threat Soviet forces could pose in an aerial campaign. At the same time, the continued deployment of Soviet fighters outside the USSR's borders -- the Flogger squadrons in Vietnam and North Korea are two recent examples -- has extended the reach of Soviet tactical air power over a much wider portion of the globe.

But the Soviets' modernization efforts have not been limited to their fighter forces, as evidenced by the impressive gains they have been making in air-to-surface capabilities. Production of the Fencer long-range attack aircraft continues. This aircraft performs a role equivalent to NATO's Tornado and our F-111. Soviet Fencer regiments continue to be deployed to Eastern European bases, increasing the depth of their potential coverage of our airspace. Air-to-surface variants of the older Flogger and Fitter series are being delivered to Soviet and allied units. The new Soviet Su-25 "tank-buster," designated "Frogfoot" by NATO, was based in Eastern Europe for the first time in 1985. One Soviet Su-25 regiment was assigned to a Soviet air base in East Germany; earlier in the year, a Czech squadron began reequipping with Su-25s. The Su-25 constitutes a significant new air threat to our ground forces. Soviet development and deployment of attack helicopters also continues. The Soviets are moving ahead in adapting attack helicopters for air-to-air combat, adding a new facet to the threat these aircraft pose -- a component of the Soviet armed forces that did not exist at all 15 years ago.

Soviet advances in air defenses also present a new challenge to our tactical air forces. For example, the Soviets and their Warsaw Pact allies are establishing complexes in Eastern Europe from which to launch the high-performance, long-range SA-5 surface-to-air missile (SAM). This threat must be eliminated if our future standoff aircraft -- such as the EC-18 Joint Surveillance Target Attack Radar System (JSTARS) -- are to be effective. Introduction of new shorter-range SAMs, such as the high-firepower SA-11 and the SA-X-15, will likewise improve Soviet defenses of maneuver forces. The new SA-X-12 mobile tactical SAM, expected to reach operational units shortly, is a high-performance system analogous to our own Patriot. Proliferation of ground-based weapons such as the SA-X-12 and SA-5 complicates our air force tasks and requires new countermeasures on our part.

Similarly, our tactical air forces face some very difficult ground targets. The Warsaw Pact has many more hardened concrete aircraft shelters for its tactical aircraft than we and our European and Asian allies do for our forces. These targets impose formidable requirements for accuracy and lethality -- demands not yet satisfied with current air-to-surface munitions.

Traditionally, the Soviet Union has fielded vast numbers of attack aircraft, SAMs, and artillery, assuming that mass would overcome any shortcomings in technology. Easily accessible Western technology has now, however, enabled the Soviets to begin fielding extremely advanced systems that are quite competitive with ours. As a result, the threat our forces will soon face is nearly as credible as the threat we will pose to the Soviets. It will require innovative planning on our part in both operational concepts and weapons development to ensure that our tactical air forces remain an effective deterrent in the future.

(1) FY 1987-91 Program

The FY 1987-91 program for the tactical air forces has been structured to procure the most capability for each dollar spent. The program combines procurement of new, highly effective systems with modifications to improve existing equipment. It serves four broad objectives:

- -- Increasing the readiness and sustainability of our forces through better training, increased stocks of spare parts, and more effective, modern munitions;
- -- Modernizing the active and reserve forces with more capable aircraft, procured competitively wherever possible to hold down costs;

- -- Enhancing our electronic warfare and command and control capabilities, to improve force survivability; and
- -- Improving our surveillance and targeting systems, to take advantage of the new capabilities afforded by modern technology.

(2) Force Composition

Our tactical air forces must be equipped and trained to perform through the entire spectrum of conflict, from counterterrorist operations to a strategic nuclear exchange. The Services operate a variety of aircraft, all having important roles in tactical operations.

One of the most important jobs of fighter aircraft is to gain and maintain control of the skies, commonly called the "counterair" mission. These aircraft are armed with numerous types of weapons, including long-range and medium-range radar-guided missiles, short-range heat-seeking missiles, and internally mounted cannons. Fighter and attack aircraft also perform two key missions in support of our ground forces. Flying in the "close air support" role, they conduct bombing operations against enemy formations in close proximity to friendly ground forces; for "interdiction" missions, their targets lie behind enemy lines. For both these missions, the aircraft employ a mix of weapons, ranging from cluster munitions and rockets to guns and air-to-surface missiles.

Rounding out the force structure is a wide array of aircraft that help the fighter and attack forces carry out their missions. The roles of these "support forces" fall into eight general categories: airborne early warning, command and control, tactical reconnaissance, electronic warfare, airborne refueling, defense suppression, tactical air control, and special operations.

Table III.B.3.1

Typical Composition of Navy and Marine Corps Air Wings

Navy		Marine Corps	
Number	**Type Aircraft**	**Number**	**Type Aircraft**
24	F-14	48	F-4 (or F/A-18)
24	F/A-18 (or A-7)	20	A-6
10	A-6	40	AV-8B (or 38 A-4M)
4	KA-6	9	TA4/0A4
4	EA-6	8	RF-4
4	E-2	8	EA-6B
10	S-3	12	KC-130
6	HS-3	48	CH-53
86	Total	60	CH-46
		24	AH-1
		24	UH-1
		12	OV-10
		313	Total

(a) Air Force Aircraft

The Air Force keeps two-thirds of its fighter inventory in the active force, and the remainder in the reserves. At present, it has the equivalent of 36.5 wings -- 24.5 active and 12 reserve. (A typical tactical fighter wing (TFW) is composed of three squadrons, each with 24 aircraft.) For the future, the Air Force plans to expand its force structure to 40 TFWs, while holding the average age of its aircraft to about 10 years.

(b) Navy and Marine Corps Aircraft

Whereas Air Force wings usually include only one type of aircraft, Navy and Marine Corps wings operate a mix of aircraft types. An active Navy carrier wing typically consists of nine squadrons: two fighter; two light-attack; one medium-attack; plus an assortment of electronic warfare and reconnaissance aircraft, tankers, and helicopters (see Table III.B.3.1). There are 13 active carrier air wings in the force today; a fourteenth will be added in FY 1987, when the Navy's next carrier joins the fleet. There are three active Marine Aircraft Wings (MAWs), one each on the East and West Coasts, and the third in Japan. A typical MAW consists of between 20 and 25 squadrons.

(3) Combat Readiness

Combat readiness is a measure of our ability to fight a war with what we have on hand. For the tactical air forces, it means having adequate inventories of aircraft kept in top-notch condition; ample stocks of spare parts, munitions, and supplies; and highly trained crews to service and fly the aircraft. The funding emphasis given to the operating accounts in recent years has yielded important gains in readiness. The FY 1987-91 program carries forward those trends, concentrating on those areas requiring further improvement.

Equipment and Supplies -- As reported in Part I, the readiness of the Air Force fighter force has increased markedly over the past six years. Target kill capability in air-to-air combat is up 130 percent over the 1980 level, while air-to-surface capability has jumped 170 percent. These tremendous increases are a result of new aircraft procurement (A-10s, F-15s, and F-16s) and stepped-up acquisitions of logistics resources -- spares, repair parts, fuel, and munitions. While expanding our inventories of these items, we are making every effort to ensure that we pay the best prices the market can offer. And to keep our forces at a high state of readiness in the future, we are working hard to develop more precise techniques for computing logistics requirements and assessing the ability of our logistics resources to support wartime operations. As a result of these efforts, we are confident that the funding we apply to the readiness accounts will keep our forces in "go-to-war" condition.

Personnel and Training -- Aircrew readiness is a function of experience, flying time, and quality of training. While the Soviets appear to be putting new emphasis on pilot initiative and independence, our pilots are still much more innovative and aggressive than their Soviet counterparts.

After the dramatic increases in pilot retention from FY 1981 through the first half of FY 1984, both the Air Force and Navy experienced a downward trend during the last half of FY 1984 and FY 1985. This means a loss of experience within the pilot communities of both Services, but not to the extent of adversely affecting readiness.

Pilot proficiency and force readiness are directly related to training time. In FY 1987, the Air Force's tactical pilots will average about 240 flying hours, while Navy fighter pilots will log an average of about 288 hours. The figures for both Services represent increases since this Administration took office.

Our air-superiority pilots are trained using the most advanced techniques technology has afforded. Air combat maneuvering ranges (ACMRs) are totally instrumented and provide aircrews an opportunity to critique their performance with the aid of computerized video displays. Modern training devices such as these enhance performance progression at greatly reduced cost. Likewise, joint-Service exercises provide active and reserve forces from the United States and allied nations an opportunity to increase their combat proficiency during integrated operations. Large-scale exercises such as RED FLAG, conducted at Nellis Air Force Base, Nevada and COPE THUNDER in the Phillipines, and Marine Corps live-fire exercises at Yuma, Arizona, provide our aircrews realistic training closely paralleling the way they expect to fight. Our fighter crews' participation in such exercises has risen by 93 percent since 1980.

(4) Force Sustainability

The possibility of extended conflict requires improvements in force sustainability. To that end, we have given high priority to increasing our stocks of war reserve munitions. New "force multiplier" weapons with improved warhead lethality and multiple-kill-per-pass capability are beginning to enter the inventory in quantity. Since 1983, the number of Air Force tactical wartime sorties that could be flown with optimum munitions has increased 65 percent. This improvement has resulted largely from the procurement of Combined-Effects Munitions (CEM), Infrared (IR) Maverick missiles (AGM-65D), Laser-Guided Mavericks (AGM-65E), GBU-15 glide bombs, and runway-cratering munitions. Continued purchases of radar-guided and heat-seeking missiles have brought us to 66 percent of our procurement goal for these categories of weapons. Further increases will come in future years as additional Sidewinder missiles, High-Speed Anti-radiation Missiles (HARM), and the new Advanced Medium-Range Air-to-Air Missile (AMRAAM) enter the inventory.

In addition to sustainability, the five-year program gives force projection a high priority. We have provided funds to preposition materiel-handling equipment and support vehicles in Europe and Southwest Asia; aircraft support equipment in Europe; and bare-base equipment in Southwest Asia. At the same time, we are providing additional storage capacity for munitions and petroleum, oil, and lubricants (POL) in both regions. These programs will shorten response times in both areas and reduce the demand for intertheather airlift and sealift resources in the critical early stages of a deployment.

(5) Force Modernization

Our modernization programs for the tactical air forces serve five goals: increasing the combat capability of our present inventory: maintaining an acceptable average aircraft age; building toward the Air Force's goal of 40 TFWs; expanding the Navy's force to 14 active carrier wings; and purchasing aircraft competitively whenever feasible to optimize procurement funding.

The FY 1987-91 program calls for continued procurement of modern, high-performance aircraft equipped with our most advanced combat and support systems. The program authorizes the Air Force to buy 1,590 fighter aircraft and the Navy and Marine Corps to purchase 1,207, at the rates outlined in Table III.B.3.2. These totals are up from last year, despite budget limitations. To ensure our force structure goals are reached with the current five-year program without increasing the average aircraft age, the Air Force plans to operate its aircraft to maintain an average age of 10 to 11 years, while the Navy and Marine

Corps believe the high stress of carrier operations requires an average service age of eight to nine years. The current plan reflects a conscious decision to allocate more resources to aircraft procurement. A corresponding decision was also made to moderate the increasing unit cost of fighter aircraft by introducing a limited fighter competition and by procuring a less expensive, modified configuration of the F-16C/D. These decisions will allow us to modernize our tactical forces and replace peacetime attrition losses while achieving a modest force growth. As these programs move forward, we will continue upgrading our existing forces with more modern weaponry and support equipment.

We remain committed to a research and development program that will ensure an effective tactical force in the 1990s. Our future air-superiority forces will benefit from the improved offensive counterair capability of the Advanced Tactical Fighter (ATF). Theater command and control capabilities will be strengthened with the addition of the Mark XV cooperative identification system. The AMRAAM missile will give our future fighter forces a multiple-target-engagement capability. And planned improvements in the F-15 and F-16 will enable those aircraft to conduct tactical operations at night and in adverse weather.

Table III.B.3.2
Fighter/Fighter Attack Procurement
(FY 1987-91)

	FY 1987	FY 1988	FY 1989	FY 1990	FY 1991
Air Force					
F-15E	48	48	48	48	48
F-16C/D	96	96	96	96	96
F-16 CM*	120	120	120	120	120
Competition	30	60	60	60	60
Total	**294**	**324**	**324**	**324**	**324**
Navy/Marine Corps					
F-14A/D	18	12	18	24	36
A-6F	11	12	18	24	24
F/A-18	120	132	132	163	163
AV-8B	42	42	42	42	42
Total	**191**	**198**	**210**	**253**	**266**

*Modified configuration.

b. Major Air Force Programs

Further details on major elements of the Air Force's program are provided below:

F-15 (Eagle) -- The F-15 is the Air Force's primary air-superiority fighter. Equipped with beyond-visual-range radar missiles, it can engage aircraft deep in enemy airspace from standoff positions in all types of weather. Following completion of F-15C/D procurement in FY 1986, the Air Force will begin producing an upgraded, dual-role version of the F-15 -- designated the F-15Es. The addition of this new model to the inventory will meet an urgent requirement of our operational commanders for an air-superiority fighter that can also fly interdiction and airfield attack missions.

For these latter roles, the aircraft will carry the new LANTIRN navigation and targeting system, which will enable it to operate against ground targets at night, while flying at low altitude. A total of 392 F-15Es are to be procured through FY 1994, including 48 in FY 1987. As they enter service, the Air Force will withdraw earlier-model F-15s from the active force and transfer them to the reserves.

F-16 (Fighting Falcon) -- The F-16 is a single-engine, high-performance fighter capable of conducting a broad spectrum of air-to-air and air-to-surface missions. The Air Force plans to continue procurement of these aircraft through FY 1994 to replace its aging F-4s and to modernize its reserve forces. The "C" and "D" versions will be able to employ our most advanced combat and support systems, including the AMRAAM, LANTIRN, ALR-74/56M radar warning receiver, and Global Positioning System (GPS). A modified, less expensive configuration version of the F-16C/D will be introduced and will be assigned a less comprehensive multirole mission. The modified configuration aircraft will be highly capable in both air-to-air and air-to-surface missions. The F-16 has demonstrated remarkable bombing accuracy. It was the overall winner of the 1983 and 1985 Gunsmoke Competition -- a worldwide, biannual gunnery competition held at Nellis Air Force Base, Nevada.

Fighter Aircraft Competition -- We are conducting a full and open competition for fighter aircraft to replace the Air National Guard's aging F-4s. (These aircraft are part of our CONUS air defense force, described in Chapter III.B.4.) In modernizing the Guard's inventory, we are seeking aircraft that not only can meet a high standard of performance, but will be highly reliable and easy to maintain. By procuring the aircraft competitively, we are confident of obtaining an effective interceptor force at an affordable price. Plans call for the source-selection process to be completed by the end of FY 1986 and for procurement to begin in FY 1987. Once this program is under way, consideration will be given to expanding the competition in the future to include tactical air mission requirements as well.

Increased-Thrust Engines -- To cope with the Soviet air-superiority challenge of the 1990s, we must improve the counterair capabilities of our forces. While the new combat and support equipment being added to the F-15 and F-16 will enhance their air-to-air potential, it also will increase their weight and reduce their aerodynamic performance. To alleviate that constraint, we plan to add more thrust to the engines now powering those aircraft. Two firms -- Pratt & Whitney and General Electric -- are under contract to the Air Force to develop higher-thrust (29,000-pound class) versions that will be very durable and easy to maintain. The program timetable calls for the engines to be installed beginning in the late 1980s.

MC-130H (Combat Talon) -- The Combat Talon is a tactical support aircraft flown by the Special Operations Forces. Its primary mission is to drop combat personnel and equipment behind enemy lines. An array of special navigating and self-protection devices help the aircraft fly through enemy airspace at night and at a low enough altitude to avoid radar detection. The Air Force plans to acquire a total of 35 Combat Talons, of which 14 will be modified C-130s and the remainder new-production models (MC-130Hs). All of the modified aircraft are already in service, and five of the new aircraft are on order, with deliveries scheduled to begin in 1988. Together with the FY 1986 authorization, the FY 1987-91 program provides funds for the remaining 16 aircraft, all of which are scheduled to enter service by FY 1993.

AC-130 (Gunship) -- The AC-130 is a modified C-130 aircraft whose primary mission is to provide support for special operations and for conventional forces by employing its highly accurate guns against enemy targets. The aircraft is configured with a precision-navigation system, terrain-following radar, and electronically aimed weapons. Deliveries of the 12 new-production aircraft will begin in FY 1990 and continue through FY 1992, offsetting the retirement of older-model aircraft. The new gunships will help revitalize our Special Operations Forces.

Low-Altitude Navigation and Targeting Infrared System for Night (LANTIRN) -- LANTIRN is a pod-mounted navigation and targeting system designed to help fighter aircraft conduct ground attacks at night and under the weather. The system, which will be installed on new F-15Es and F-16C/Ds, will enable those aircraft to penetrate enemy airspace while flying low enough to elude air defense radars. The navigation pod successfully completed initial operational testing in December 1984 and entered low-rate production last April. The targeting pod is undergoing thorough developmental testing and should be ready for a production decision this spring.

Imaging Infrared (IR) Maverick -- The Maverick is an air-to-surface missile designed to destroy enemy armor. Unlike the earlier TV-guided version, the IR system uses an imaging infrared seeker for guidance, enabling it to operate equally well in day or night. Now in low-rate initial production, the missile is scheduled to become operational in early 1986. A second source is under contract to begin producing the system later this year.

Advanced Medium-Range Air-to-Air Missile (AMRAAM) -- The AMRAAM is a new, all-weather air-to-air missile being developed for use by both the Air Force and the Navy. Unlike current radar missiles, which are guided to their targets by radar systems aboard the launching aircraft, AMRAAM has its own radar, giving it a "launch-and-maneuver" capability. This means that the missile can guide itself to its target, freeing the launching aircraft to pursue other targets or to return to base. Aircraft armed with AMRAAM will therefore be able to engage multiple targets on a single intercept, reducing their exposure to enemy air defenses while increasing overall combat effectiveness. Sophisticated electronic countercountermeasures capabilities being built into the missile will enable it to cope with the rapidly evolving electronic warfare threat. The AMRAAM program was restructured last year in a major effort to achieve cost-effective production features.

AIM-7M (Sparrow) -- The AIM-7M is an all-weather, semi-active, radar-guided air-to-air missile carried by both Air Force and Navy aircraft. First procured in FY 1980, the "M" model features much improved electronic counter-countermeasures and an improved look-down/shoot-down capability relative to earlier versions.

AIM-9M (Sidewinder) -- The AIM-9M is an infrared-guided air-to-air missile carried by both Air Force and Navy aircraft. It incorporates improved background-discrimination and counter-countermeasures capabilities relative to earlier Sidewinder models. Other improvements include a reduced-smoke motor, which makes it more difficult for enemy aircrews to see the missile and, therefore, determine the launching aircraft's location.

Tactical Aircraft Modifications -- We modify our aircraft to enhance their combat capabilities, improve their reliability and maintainability, correct safety defects, and extend their service lives. Major elements of the FY 1987-91 program include: for the F-4 -- the addition of low-smoke engines, improved radar warning receivers, a self-protection AIM-9L/M capability, and a digital navigation system; for the RF-4 -- a radar upgrade; for the A-7 -- the provision of a forward-looking infrared (FLIR) capability for three squadrons; for the F-15 -- a multistage improvement program to incorporate new capabilities; and for the F-16 -- an operational capability upgrade program to update the older "A" and "B" models, and a multinational staged improvement program to add new systems and avionics to F-16C/Ds.

Air Base Survivability (ABS) -- We are devoting considerable effort to improving the ability of our overseas air bases to support wartime operations. In some cases, that has meant building additional shelters for aircraft or expanding storage capacity for fuel and munitions; in other instances, we have had to take steps to improve the survivability of the bases themselves against air and ground attack.. Though the projects may vary from one location to the next, their overriding purpose remains the same: to ensure that key airfields abroad could survive an attack and go on to generate sufficient numbers of combat sorties.

Under the ABS program, the Air Force is improving facilities at airfields from which our forces with NATO, Pacific, or SWA commitments would operate in a war. The program in Europe involves the 22 main operating bases (MOBs) and five standby bases maintained by the United States, and the more than 70 collocated operating bases (COBs) maintained by the European allies but shared with U.S. air forces in wartime. Funding for U.S. facilities at MOBs and COBs is provided by the NATO infrastructure budget or by the United States unilaterally, as specified in NATO agreements. Examples of projects we must fund unilaterally under existing NATO agreements are rapid runway repair equipment, chemical defense measures, and camouflage gear. NATO infrastructure funding covers the costs of building or upgrading basic operating facilities, such as main runways, aircraft shelters (70 percent of the requirement), and munitions storage sites.

In general, ABS improvements include three types of measures: active defense, passive defense, and recovery. Active defense measures are designed to prevent the air and ground threat from reaching air base targets. Specific examples include Rapier surface-to-air missiles, which provide point defense at selected bases, and ground defense personnel trained to defeat special operations forces. Passive defenses, on the other hand, serve to limit damage to air bases, aircraft, and personnel should an attack actually occur. The construction of concrete revetments and hardened facilities, and the provision of chemical warfare defense equipment and clothing, all contribute to our passive defense capabilities. ABS recovery measures are designed to restore combat sortie generation capability quickly. They include construction of alternate launch and recovery surfaces, and the acquisition of improved rapid runway repair equipment and vehicles, mobile aircraft arresting systems, and mobile armored reconnaissance vehicles for identifying unexploded ordnance rapidly and safely.

While improving the survivability of our in-place force structure remains our highest ABS priority, we are also working closely with our allies to ensure the survivability of U.S. reinforcing squadrons that would operate from our COBs. In FY 1985, we concluded agreements with Norway and Denmark, and in FY 1986 we will pursue agreements with Turkey and Italy, to provide protected parking for U.S. aircraft until aircraft shelters are built. These agreements encourage the host nations to develop a compatible rapid runway repair capability. We are also pursuing bilateral agreements with our allies to ensure that point air defense requirements are met at air bases where U.S. Army forces are not available. In FY 1985, we signed a Memorandum of Understanding with Turkey to provide Rapier protection at selected U.S. installations in Turkey.

	FY 1985 Actual Funding	FY 1986 Planned Funding	FY 1987 Proposed Funding	FY 1988 Proposed for Authorization
F-15				
Development:				
$ Millions	189.6	230.0	209.0	106.5
Procurement:				
Quantity	42	48	48	48
$ Millions	2,045.5	1,962.3	2,027.3	2,131.3
F-16				
Development:				
$ Millions	91.4	66.3	81.3	42.7
Procurement:				
Quantity	150	180	216	216
$ Millions	2,804.2	3,219.0	3,842.6	3,932.1
MC-130H				
Procurement:				
Quantity	2	2	5	5
$ Millions	107.1	133.7	251.5	246.6
AC-130H				
Procurement:				
Quantity	—	1	—	5
$ Millions	—	33.4	18.2	309.3
LANTIRN				
Development:				
$ Millions	97.8	39.8	40.1	20.4
Procurement:				
$ Millions	103.4	441.4	815.4	830.0
IR Maverick				
Procurement:				
Quantity	2,600	3,115	5,119	7,927
$ Millions	377.5	435.0	638.9	768.3
AMRAAM				
Development:				
$ Millions	204.3	101.3	39.1	13.0
Procurement:				
Quantity	—	15	260	833
$ Millions	73.1	209.0	756.8	1,041.3
AIM-9M				
Procurement:				
Quantity	1,000	3,770	2,337	1,444
$ Millions	77.4	184.1	161.3	108.2
Tactical Aircraft Modifications:				
Procurement:				
$ Millions	805.8	809.1	830.8	1,186.4

c. Navy and Marine Corps Programs

Naval aviation programs for the next five years continue our commitment to providing the modern aircraft and weapons systems needed to counter a rapidly growing Soviet maritime threat. The five-year plan projects procurement of 1,207 Navy and Marine Corps tactical aircraft, of which 1,117 will be fighter and attack planes. The active force will continue its modernization with AV-8Bs and F/A-18s, while reserve units will update their inventories with F-14s, F/A-18s, A-6Es, and E-2Cs. The overall lethality and survivability of the force will improve with the introduction of upgraded F-14D and A-6F models, while a restructured mix of fighter, attack, and support aircraft will give carrier air wings added flexibility for meeting mission requirements.

Further details on major naval tactical aircraft programs are provided below:

F-14 (Tomcat) -- The F-14 is a carrier-based, all-weather, air-superiority fighter with a uniquely capable and extremely lethal weapons system. Armed with the long-range Phoenix air-to-air missile, the F-14 is the free world's only naval aircraft capable of intercepting oncoming bombers before they come within range to threaten our battle groups. For engagements at shorter range, the F-14 carries AIM-7 Sparrow and AIM-9 Sidewinder missiles; an internally mounted 20mm cannon for close-in combat rounds out its weapons suite. This array of weaponry, coupled with the aircraft's high performance, gives the F-14 great versatility and depth as a fighter and interceptor. To ensure its effectiveness against new-generation Soviet aircraft, we are planning major improvements in the aircraft's radar, avionics, and engine thrust. Starting in FY 1986, the F-14A will be procured with a new engine -- the General Electric F-110 -- with significant safety and performance enhancements. In FY 1988, an upgraded version of the aircraft, the F-14D, will enter production. That model will incorporate improved electronic counter-countermeasures capabilities, a digital avionics suite, and more reliable, higher-performance engines. Two naval reserve squadrons were modernized with the F-14 in FY 1985; the remaining two reserve squadrons will complete their transition from F-4s to F-14s in FY 1988.

A-6 (Intruder) -- The A-6 is a medium-attack, carrier-based aircraft equipped to locate and strike land and sea targets in day or night and in all types of weather. Operated by Navy and Marine Corps units, the aircraft is particularly well-suited for war-at-sea, power projection, and deep interdiction roles. Although it has been in the inventory for more than two decades, repeated upgrades have kept the A-6 one of our most versatile and capable attack aircraft. One of the most important recent additions has been the Target Recognition Attack Multisensor (TRAM) system, which enables the aircraft to deliver laser-guided weapons and to operate at night much more effectively. To ensure its continued effectiveness in the future, a significantly improved model -- the A-6F -- is planned for procurement beginning in FY 1988. Representing a major advancement in all-weather attack technology, the A-6F will incorporate improved survivability and reliability features, digital avionics, a high-resolution radar, and new engines. In addition, we are studying advanced tactical aircraft (ATA) concepts that could lead to the introduction of a replacement aircraft in the 1990s.

AV-8B (Harrier) -- The Harrier is a second-generation vertical/short-takeoff and landing (V/STOL) aircraft entering the Marine Corps inventory to replace the AV-8A/C and A-4M. Compared with earlier V/STOL aircraft, the AV-8B has a significantly greater flying range and offers more payload options. It also is more stable in flight than previous V/STOL aircraft, which decreases training requirements and improves flight safety. With its vertical takeoff capability, the aircraft can operate from remote unprepared airfields, highways, or any surface ship (merchant or combatant) capable of landing a helicopter. Such basing options give operational commanders increased response flexibility, as the British found during the Falkland conflict. The AV-8B is equipped with an angle-rate bombing system, which enables it to deliver unguided ordnance with nearly the precision of our modern terminally guided munitions. Although not designed for use as a fighter, the AV-8B has an excellent self-defense capability against potential adversary aircraft.

F/A-18 (Hornet) -- The Hornet is a state-of-the-art, dual-mission fighter and attack aircraft already being deployed aboard some of our carriers and flying in operational Marine squadrons. As a fighter, the F/A-18 has unsurpassed acceleration and maneuverability ability in the flight regimes where aerial combat most often occurs. The Hornet's air-to-air weapons are updated versions of reliable and proven systems: the M-61 20mm cannon, the AIM-7 Sparrow missile, and the AIM-9 Sidewinder missile. For attack missions, the F/A-18 carries the entire spectrum of ordnance approved for naval aircraft. It can carry these weapons at greater speeds than previous attack aircraft and deliver this ordnance more accurately than other aircraft.

Reliability and maintainability were designed and built into the F/A-18. This has already begun to pay dividends in the form of higher sortie rates, higher in-commission rates, and fewer maintenance man-hours. An additional benefit of its reliability is the Hornet's extremely low accident rate, which has so far been unmatched by any previous tactical aircraft at a comparable stage of development. The Congress and taxpayers of the United States can take justifiable pride in their role of providing the Hornet to our naval forces.

Laser Maverick -- The Laser Maverick is a member of a family of precision-guided, standoff munitions designed for use against a variety of land and naval targets such as tanks, bunkers, and ships. All Marine fighter and attack aircraft are capable of employing the missile. The Laser Maverick finds its target by homing in on reflected energy from a coded laser beam emitted by an airborne or ground laser tracking device. This advanced guidance mechanism enables the launch aircraft to fire its missiles and leave the target area before enemy air defenses have time to react. Safety features that prevent the warhead from detonating if the laser beam is lost make the missile an excellent standoff weapon for use in close proximity to friendly troops. The launch range depends only on sufficient and properly coded laser energy reaching the missile's seeker. The Laser Maverick's 300 pound blast-fragmentation warhead is ideal for use against bunkers and has been shown to have an excellent potential for stopping advancing enemy armor.

AIM-54A/C (Phoenix) -- The Phoenix is a long-range air-to-air missile designed for use with the F-14. Each of those aircraft can carry six Phoenix missiles and launch them virtually simultaneously against six different targets. The missile's design enables it to be used in any type of weather as well as under heavy jamming conditions. First procured in FY 1980, the "C" model has improved electronic counter-countermeasures features relative to earlier versions.

Tactical Aircraft Modifications -- We modify our aircraft to enhance their combat capability, improve their reliability and maintainability, correct safety defects, and extend their service lives. Major elements of the FY 1987-91 program include: for the A-6 -- an inertial navigation system, the target recognition attack multisensor (TRAM), and new wings of composite construction, which will add 8,800 flight hours to the aircraft; for the EA-6B -- improved radar jamming equipment (the ICAP II program and ALQ-99 pod); and for the E-2C -- an improved radar antenna (the TRAC-A program).

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OSD - 15 Tabular Charts

	FY 1985 Actual Funding	FY 1986 Planned Funding	FY 1987 Proposed Funding	FY 1988 Proposed for Authorization
F-14A/D				
Development:				
$ Millions	276.6	347.9	268.4	156.7
Procurement:				
Quantity	24	18	15	12
$ Millions	976.9	784.6	690.9	962.7
F/A-18				
Development:				
$ Millions	31.2	58.3	59.1	63.5
Procurement:				
Quantity	84	84	120	132
$ Millions	2,417.1	2,436.1	3,406.7	3,594.9
A-6E/F				
Development:				
$ Millions	68.7	238.1	144.3	72.2
Procurement:				
Quantity	6	11	11	12
$ Millions	310.5	301.1	390.1	801.1
AV-8B				
Development:				
$ Millions	61.3	65.3	48.6	20.5
Procurement:				
Quantity	32	46	42	42
$ Millions	695.5	918.9	761.9	905.6
AIM-7M				
Procurement:				
Quantity	2,082	2,445	2,095	2,117
$ Millions	362.5	424.4	345.3	378.3
Laser Maverick				
Development:				
$ Millions	6.9	2.0	—	—
Procurement:				
Quantity	600	1,500	1,800	575
$ Millions	103.0	167.2	201.7	81.7
AIM-54A/C				
Procurement:				
Quantity	265	265	205	430
$ Millions	441.1	353.4	321.5	441.9

d. Electronic Combat

Electronic combat (EC) refers to actions taken against an enemy's electromagnetic capabilities or in support of our own. It consists of three elements: electronic warfare (EW); command, control, and communications countermeasures (C^3CM); and suppression of enemy air defenses (SEAD).

The FY 1987-91 program funds a complementary mix of systems designed to degrade hostile air defenses; deny the enemy unrestricted use of his command, control, and communications systems; and protect the security of our own communications.

Details on major elements of the program are provided below:

EC-130H (Compass Call) -- The Compass Call is a specially configured C-130 aircraft designed to disrupt enemy communications systems from standoff ranges. Previous budgets have provided funds to modify and equip nine C-130s for the Compass Call mission; the FY 1987 budget seeks funds for six more conversions, satisfying the near-term procurement objective.

EA-6B (Prowler) -- This carrier-based tactical support aircraft is designed to degrade enemy defenses by jamming their radars and communications systems. Improved features being added to the aircraft will enable it to counter new generations of enemy radars and weapons systems.

EF-111A -- The 36 aircraft in the EF-111A fleet are designed to jam enemy early-warning, acquisition, and ground-control intercept radars from secure, standoff ranges. We are under contract to update the EF-111A's jamming equipment to meet the improved quality and number of hostile radar systems.

F-4G (Wild Weasel) -- A highly modified version of the F-4E, the F-4G is designed to locate and attack enemy radar sites. For this mission, the aircraft is armed with the new High-Speed Antiradiation Missile (HARM) and older antiradiation missiles. Over the next five years, we anticipate modifying an additional 18 F-4Es to the "G" configuration, while updating the avionics suites of all the aircraft in the F-4G fleet. These upgrades will enable the aircraft to counter the more advanced Soviet radars projected for deployment in the 1990s.

High-Speed Antiradiation Missile (HARM) -- This new antiradiation missile, carried by Air Force and Navy aircraft, is designed to suppress or destroy enemy air defense radars. The missile guides itself to its targets by "homing in" on the enemy radar beams. The weapon's increased velocity relative to previous antiradiation missiles allows less time for enemy reaction, while its expanded radar-frequency coverage enables a greater number of radar systems to be brought under attack. Future improvements will include the incorporation of a low-cost seeker (LCS), currently under development by the Naval Weapons Center. That system promises to be much more economical to produce than the existing seeker.

Precision Location Strike System (PLSS) -- This near-real-time, all-weather electronic combat system will play a key role in our future SEAD capabilities. It is designed to help friendly ground and air forces locate enemy radar emitters and conduct strikes against them. Electromagnetic sensors on TR-1 aircraft flying in standoff orbits would spot the targets and relay intercept data to ground stations, where the information would be processed and distributed to friendly forces. Thus, theater commanders will have a total picture of enemy electronic emitter operations and be able to assign strikes against these targets. The system is scheduled to become operational in Europe in the late 1980s.

The Airborne Self-Protection Jammer (ASPJ) -- This internally mounted electronic jammer will give our tactical forces better self-protection capabilities against modern radar-controlled airborne and ground-launched weapons. The system is designed for use with a variety of aircraft, including the F-16, F-14, F/A-18, A-6E, and AV-8B. It is being developed jointly by the Air Force and Navy, under the Navy's lead. The system is now undergoing developmental ground testing, and should be ready for an initial production decision later this year. Ultimately, we plan to produce some 2,200 systems -- 1,200 for the Air Force and 1,000 for the Navy.

e. Antijam, Secure Voice, Data, and Identification Friend or Foe (IFF) Systems

Joint Tactical Information Distribution System (JTIDS) -- This new digital system will provide secure, jam-resistant channels for transmitting data and voice communications. During the past year, we merged the Services' JTIDS programs into a single development effort in the interest of saving costs and providing a standard system for use by all our forces. JTIDS equipment is already in service on Air Force E-3 (AWACS) aircraft and at NATO command and control centers. Additional terminals of various sizes and capabilities will be fielded into the 1990s.

Also under development is a new airborne VHF radio that will be interoperable with the Army's SINCGARS system. The Air Force will buy the jam-resistant Army VHF/FM system for use on the ground.

TRI-TAC -- Under the TRI-TAC program, we are replacing aging ground communications equipment with new jam-resistant digital systems. The program provides both telephones and teletype machines designed to support a high volume of communications between deployed air bases and tactical air control systems. Some of this equipment has already been fielded by the Services and allied forces.

Tactical Air Control System Improvements (TACSI) -- Under the TACSI program, the Air Force and Marine Corps are acquiring new, modular tactical air operations equipment to replace the large, inflatable command and control shelters they have used since the Vietnam years. State-of-the-art computers will be capable of tracking large numbers of aircraft, and distinguishing friend from foe. With a change of software, the modular control element could function as a ground attack control center, enabling tactical air control systems to control deep-interdiction air attacks more rapidly against time-sensitive ground targets. To counter the low-altitude, high-intensity electronic countermeasures threat, the Air Force has acquired the first of 65 ultra-low sidelobe antennas for its tactical radars. Future improvements will make the TACSI system more survivable against enemy antiradiation missiles. The FY 1987-91 program projects procurement of 107 TACSI devices, or 60 short of the full requirement. Fiscal constraints have delayed the remaining purchases until the years beyond 1991.

	FY 1985 Actual Funding	FY 1986 Planned Funding	FY 1987 Proposed Funding	FY 1988 Proposed for Authorization
Compass Call				
Development:				
$ Millions	23.4	35.8	60.3	—
Procurement:				
$ Millions	43.2	29.4	38.6	22.7
EF-111				
Development:				
$ Millions	—	—	—	—
Procurement:				
Quantity	—	—	—	—
$ Millions	—	—	—	60.7
EA-6B				
Development:				
$ Millions	35.8	78.2	69.7	58.5
Procurement:				
Quantity	6	12	12	12
$ Millions	399.2	455.6	450.2	460.7
HARM				
Development:				
$ Millions	4.0	2.6	3.9	3.1
Procurement:				
Quantity	1,684	2,275	3,204	3,204
$ Millions	589.9	656.3	767.5	757.3
F-4G Wild Weasel				
Development:				
$ Milions	47.3	35.7	38.7	23.3
PLSS				
Development:				
$ Millions	76.9	61.5	26.6	11.1
Procurement:				
$ Millions	166.5	97.5	111.0	4.0
ASPJ				
Development:				
$ Millions	60.9	25.8	30.0	12.1
Procurement:				
$ Millions	33.1	110.8	72.4	236.2
TRI-TAC				
Development:				
$ Millions	74.7	44.0	35.8	45.8
Procurement:				
$ Millions	266.7	366.4	503.2	582.6
TACSI				
Development:				
$ Millions	16.1	29.7	21.7	41.7

f. Target Acquisition, Surveillance, and Warning

The ability to locate, identify, and attack enemy air, naval, and ground forces is critical to effective tactical air operations and, therefore, to the outcome of the battle. The following major programs are improving our capabilities in this area.

E-3 Airborne Warning and Control System (AWACS) -- This Air Force aircraft, a derivative of the Boeing 707, is equipped with a long-range, "look-down" radar with substantial resistance to jamming. Capable of detecting both air and maritime targets, and of managing multiple fighter and attack sorties, the AWACS provides surveillance, warning, and control capabilities for use in North American air defense, as well as in overseas theaters of operation.

The 34 aircraft in the U.S. E-3 fleet have seen considerable advances since their initial deployment. Crew size has grown by 26 percent, tracking capacity has tripled, and command and control capabilities have increased by 46 percent. In addition, the E-3 is flying 50 percent more hours than originally planned, while improving its mission capability by 15 percent above the originally forecast rate. A series of sensor, communications, and platform improvements will ensure that the E-3 remains an effective, survivable airborne surveillance system in the future.

E-2C (Hawkeye) -- This all-weather, carrier-based aircraft plays a vital role in almost every facet of Navy tactical air operations. Its primary mission is to provide early warning of approaching enemy bombers and vector interceptors into attack position. In addition, the E-2C performs a variety of other tactical support functions, including surface surveillance coordination, strike force and air traffic control, communications relay, and search and rescue assistance. To ensure the E-2C retains its advantage against the future threat, major improvements are being made in its sophisticated electronic suite.

TR-1 -- The TR-1 is a high-altitude U-2 derivative designed to carry a reconnaissance or Precision Location Strike System (PLSS) payload. The TR-1's ability to accommodate different sensor packages gives it the flexibility to respond to changing mission needs. The reconnaissance package can provide 24-hour, all-weather surveillance of enemy first- and second-echelon forces.

Fourteen TR-1s have already been delivered to the Air Force, and a functional prototype ground processing and reporting station has been installed in Europe. Plans call for the fleet to grow to 26 aircraft and for additional data processing terminals to be fielded.

Joint Surveillance Target Attack Radar System (Joint STARS) -- Joint STARS is the cornerstone of our new strategy for countering enemy second-echelon forces. Now in full-scale engineering development, the system will consist of sophisticated multimode radars carried by Air Force C-18 (modified Boeing 707) aircraft. The radars will be able to spot moving targets, such as enemy tank columns, deep in hostile territory. Information about the targets would be sent virtually instantaneously to ground control stations, where it would be processed and relayed to tactical commanders for targeting decisions.

The five-year program supports the procurement of ten C-18 aircraft to satisfy near-term requirements, while providing for long-term improvements in the C-18's survivability.

	FY 1985 Actual Funding	FY 1986 Planned Funding	FY 1987 Proposed Funding	FY 1988 Proposed for Authorization
E-3A Modification				
Development:				
$ Millions	65.1	118.8	137.2	117.8
Procurement:				
$ Millions	78.1	4.1	33.5	32.4
E-2C				
Development:				
$ Millions	34.4	23.6	34.5	63.4
Procurement:				
Quantity	6	6	6	6
$ Millions	334.1	359.8	335.3	374.2
TR-1/U-2				
Procurement:				
Quantity	4	6	3	—
$ Millions	207.4	315.2	100.3	59.2
Joint STARS				
Development:				
$ Millions	96.4	131.4	383.6	361.7
Procurement:				
$ Millions	5.0	—	63.4	107.9

g. Rapid Deployment Force Programs

The inherent deployment flexibility of aircraft makes them a key element of our rapid deployment forces. While virtually all tactical air forces are considered "rapidly deployable," the Air Force and Marine Corps have designated several units for commitment to the U.S. Central Command (USCENTCOM), oriented toward Southwest Asian (SWA) operations. A mix of fighter, attack, and support aircraft have undergone special training to prepare them for this assignment. The BRIGHT STAR 85 exercise offered Air Force and Marine air and ground units a valuable opportunity for in-theater training, while INFERNO CREEK 85 provided realistic training for combat aircrews. Likewise, our detachment of E-3A AWACS in Saudi Arabia receives valuable training and helps provide stability in the Persian Gulf as it monitors air and naval traffic. Our SWA construction programs are progressing very well. Nearing completion are expanded parking aprons, fuel storage areas, navigation facilities, and maintenance support areas.

h. Conclusion

The FY 1987-91 tactical air program represents a blend of new system procurements and modifications of existing systems to maximize our combat capability within fiscal realities. The program will increase the readiness and sustainability of our forces while accommodating a modest force growth. Continued emphasis will be placed on procuring more modern munitions to increase force effectiveness. Top research and development priority will go to several high pay-off programs such as AMRAAM, JTIDS, PLSS, and Joint STARS. We will continue to make our aircraft more survivable with the incorporation of electronic countermeasures suites. The total program will yield a force that is balanced, flexible, and capable of responding to hostilities wherever they might occur.

4. Nuclear Forces

a. Introduction

The President called for a strategic modernization program early in his Administration to counter the massive Soviet buildup of strategic nuclear forces and defenses. The President's program directed an across-the-board modernization of U.S. strategic offensive forces; strategic defensive forces; and strategic command, control, communications, and intelligence systems. This modernization was designed to ensure continued deterrence and to provide the Soviet leadership incentives for equitable, mutual, and verifiable arms reductions.

An even more significant step toward deterring war and providing incentives for negotiated arms reductions was taken by the President when he established an intensive research effort, the Strategic Defense Initiative (SDI), to examine technologies that may allow the United States to develop defenses against ballistic missiles. This research program, in conjunction with the President's strategic modernization program, provides the basis for ensuring peace today and offering hope for the future.

The modernization effort has already begun to show results. Peacekeeper intercontinental ballistic missiles (ICBMs) are well into production, the first five B-1B bombers have been delivered, Trident submarines continue to enter service, and increasing numbers of air- and sea-launched cruise missiles are being deployed. Meanwhile, work continues on other systems, including the Trident II (D-5) submarine-launched ballistic missile, the advanced technology bomber, the advanced cruise missile, and the Small ICBM.

The improvements in strategic defenses are equally significant. We have begun to deploy new atmospheric surveillance radars and to modernize our air defense interceptor squadrons. We have successfully tested an antisatellite weapon. We continue to make significant progress in the SDI research effort and are initiating a parallel research program for advanced air defenses.

We are also improving the warning sensors, communications systems, and command centers that support our strategic forces. These improvements provide for greater survivability in a nuclear war and are essential elements of a stable deterrent.

We continue to adhere to NATO's decision to counter substantial SS-20 deployments by deploying ground-launched cruise and ballistic missiles in Europe. A modernized intermediate-range force is essential for negotiating mutual and equitable arms reductions with the Soviets.

b. Composition of U.S. Nuclear Forces

U.S. nuclear forces can be grouped into four categories: strategic offensive forces; strategic defensive forces; associated command, control, communications, and intelligence (C^3I) systems; and nonstrategic nuclear forces.

Strategic offensive forces include land-based intercontinental ballistic missiles (ICBMs); submarine-launched ballistic missiles (SLBMs); and long-range bombers armed with gravity bombs, short-range attack missiles (SRAMs), and air-launched cruise missiles (ALCMs). Together, these three elements of the force -- land- and sea-based missiles and bombers -- constitute the strategic nuclear triad.

At present, the strategic defensive forces include ground- and space-based surveillance systems and air defense forces. Surveillance systems warn of ballistic missile and bomber attacks, and detect and track objects in space. These systems contribute to deterrence by ensuring timely warning of an attack, thereby reducing a potential aggressor's confidence that a surprise attack could be successfully carried out. Air defense forces control access to North American airspace and provide a limited defense against bombers and cruise missiles. Although we have no defenses against ballistic missiles today, SDI research is examining technologies that could allow the deployment of effective ballistic missile defenses in the future.

Strategic C^3I systems provide attack warning and assessment information, and support command functions by linking warning sensors, command centers, and forces. Effective deterrence demands that these systems be able to function both during and after an attack. We have learned that our nuclear forces are only as strong as the C^3 systems that support them.

Nonstrategic nuclear forces include intermediate-range nuclear forces (INF), such as intermediate-range ballistic missiles, land-based cruise missiles, and bombers carrying nuclear weapons; short-range nuclear forces (SNF), such as artillery projectiles and surface-to-surface missiles; land-based defensive systems, such as surface-to-air missiles and atomic demolition munitions; and sea-based systems. These forces enhance deterrence by providing a capability to respond at the lower end of the nuclear spectrum, firmly linking our strategic forces to our conventional forces.

c. FY 1987-91 Programs for Strategic Forces

The FY 1987-91 program continues the President's strategic modernization plan and pursues a vigorous research program for defenses against ballistic missiles.

(1) Strategic Offensive Forces

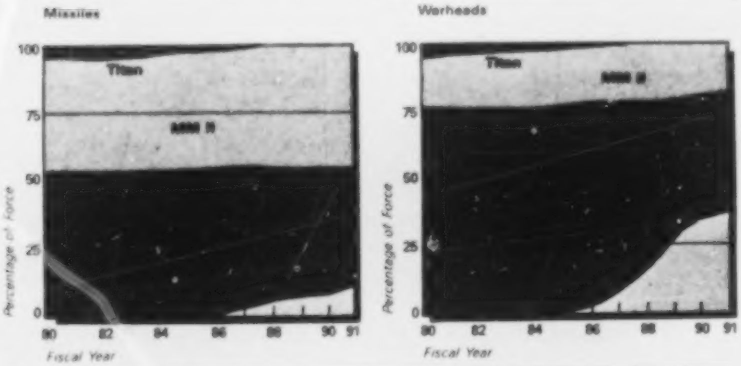
(a) The ICBM Force

The ability of land-based missiles to put time-urgent, hardened targets at risk is essential for strategic deterrence. With that in mind, we are continuing the President's strategic modernization program for the ICBM force by building the Peacekeeper missile, developing a Small ICBM, and investigating advanced basing technology. At the same time, we are maintaining and modernizing the Minuteman force and retiring the aging force of Titan IIs. The last of the Titans will be deactivated in FY 1987. Chart III.B.4.1 shows the projected composition of the ICBM force through FY 1991.

The Peacekeeper has performed exceptionally well in its ten test flights. The first silo launch took place last August from a modified Minuteman III silo at Vandenberg Air Force Base, California. We are currently modifying silos at F. E. Warren Air Force Base in Wyoming, where the first Peacekeepers will be deployed later this year. In keeping with recent congressional limitations, we plan to put only 50 Peacekeepers into existing Minuteman silos. In addition, we will investigate survivable modes for basing the second 50 missiles. The FY 1987 budget includes funds for 21 test missiles and for research on advanced basing modes, as described below.

Research on the Small ICBM continues. This new weapon promises to complicate Soviet attack planning and enhance survivability in an

Chart III.B.4.1
ICBM Force Modernization



era of increasingly accurate Soviet missile forces. The missile's single warhead and potential mobility would make it a low-value target that's hard to find. After vigorous competition among several contractors, we have awarded all of the contracts leading up to full-scale development of the missile and its mobile launcher. Our latest tests indicate that the launcher can achieve satisfactory levels of hardness within the weight constraints demanded by mobility. We are requesting funds to initiate full-scale development of the Small ICBM and hardened mobile launcher in FY 1987.

In the area of advanced basing technology, studies are under way on several potential basing modes for the second 50 Peacekeepers. During FY 1987, we will select one candidate for continued research and development. Much of the basing research could be applied to any future ICBM.

The FY 1987 program continues to replace aging Minuteman components and test equipment.

	FY 1985 Actual Funding	FY 1986 Planned Funding	FY 1987 Proposed Funding	FY 1988 Proposed for Authorization
Peacekeeper Missiles and Basing				
Development:				
$ Millions	1,631	734	750[b]	—
Construction:[a]				
$ Millions	96	56	28	20
Procurement:				
Quantity	21	12	21	48
$ Millions	2,490.8	1,776.8	1,473.5	2,142.7
Small ICBM and Mobile Launcher				
Development:				
$ Millions	462	624	1,396	2,593

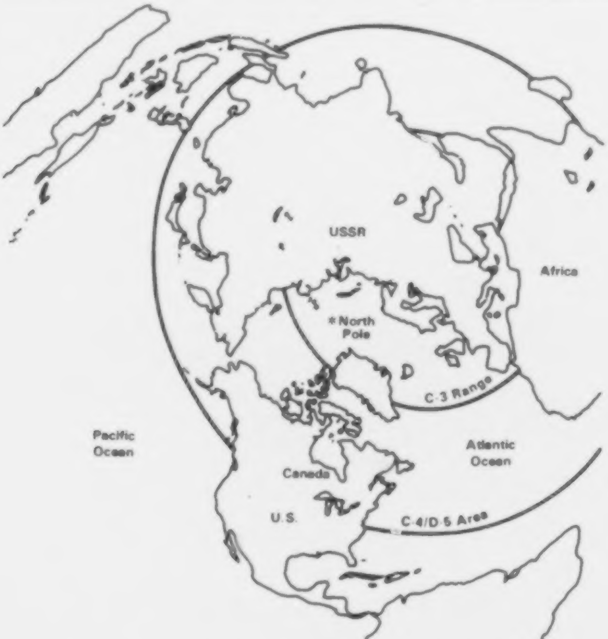
[a] Excludes planning and design, and family housing.
[b] Includes $370 million for second 50 Peacekeeper missile basing mode and $20 million for deep basing.

	FY 1985 Actual Funding	FY 1986 Planned Funding	FY 1987 Proposed Funding	FY 1988 Proposed for Authorization
Advanced Basing Technology				
Development: $ Millions	180	122	—	—
Minuteman Modernization				
Development: $ Millions	4.6	5.5	67.5	221.9
Procurement: $ Millions	119.9	126.7	105.6	133.4

(b) Sea-Based Strategic Nuclear Forces

Submarine-launched ballistic missiles remain the most survivable element of the strategic triad. Their survivability and post-attack responsiveness make them a potent and stabilizing deterrent to Soviet nuclear attack.

Chart III.B.4.2
Extended Patrolling Area of Newer U.S. SLBMs


USSR
Africa
*North Pole
C-3 Range
Pacific Ocean
Atlantic Ocean
Canada
U.S.
C-4/D-5 Area

NOTE: These are illustrative patrolling areas to retaliate against Moscow, and do not necessarily reflect U.S. SSBN operating areas.

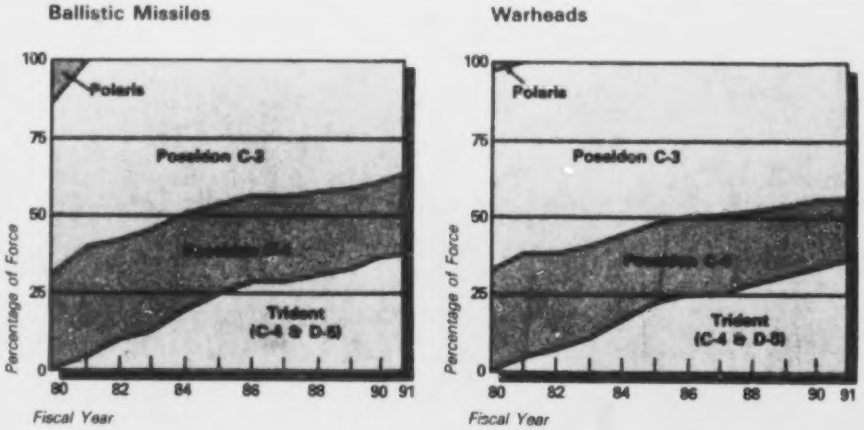
Poseidon ballistic missile submarines (SSBNs) have been the backbone of our submarine-launched ballistic missile force for more than 20 years. In the late 1970s, 12 of these submarines were modified to carry the Trident I (C-4) missile instead of the Poseidon (C-3) carried by the remaining 18 ships. The C-4 has greater range and accuracy than the C-3. The longer range of the newer missile increased the ocean area available to patrolling SSBNs and added flexibility to the sea-based deterrent (see Chart III.B.4.2). Beginning in the early 1990s, the Poseidon submarines will reach their thirtieth year of service, the approximate age at which they must be retired.

Under the strategic modernization program, we plan to build Trident submarines at the rate of one per year. Six of these SSBNs are already operational, and the seventh began sea trials last September. At that time, consistent with the President's decision regarding adherence to SALT provisions, we began dismantling one Poseidon submarine. That ship, after its missile tubes have been removed, will be converted into a moored training ship and used to provide realistic training for prospective propulsion plant operators on nuclear-powered ships.

The final component of the SSBN modernization program is the Trident II (D-5) missile. Trident II will have a larger payload capacity than the C-4 missile, and it will be the first U.S. SLBM capable of retaliating effectively against hardened Soviet targets. Now in full-scale development, it will be deployed at the end of this decade on the ninth and succeeding Trident submarines. Later, it will be retrofitted into the first eight Tridents. The FY 1987 budget includes funds to procure the first 21 D-5 missiles.

Chart III.B.4.3 shows the projected composition of the sea-based nuclear force through FY 1991.

Chart III.B.4.3
Sea-Based Force Modernization



Finally, we are continuing to deploy nuclear Tomahawk sea-launched cruise missiles (SLCMs) aboard selected Navy ships. These missiles, through their dispersal aboard many ships, enhance deterrence by complicating an attacker's planning and by augmenting our survivable nuclear reserve force.

	FY 1985 Actual Funding	FY 1986 Planned Funding	FY 1987 Proposed Funding	FY 1988 Proposed for Authorization
Trident Submarine				
Development:				
$ Millions	32.2	38.2	51.8	86.2
Procurement:				
Quantity	1	1	1	1
$ Millions	1,503.6	1,309.4	1,509.1	1,516.5
Trident I Missile				
Procurement:				
Quantity	—	—	—	—
$ Millions	123.2	34.4	4.7	18.3
Trident II Missile				
Development:				
$ Millions	2,010.8	2,104.4	1,632.9	1,179.8
Procurement:				
Quantity	—	—	21	66
$ Millions	162.9	550.9	1,424.4	2,283.7

(c) The Strategic Bomber and Tanker Force

The flexibility of the manned bomber force will continue to make it an essential element of the triad. Bombers can be launched on warning of an attack to enhance survivability; they can be redirected or recalled after launch; they can seek out and attack moveable targets; and they can be rearmed for follow-on missions. Armed with conventional munitions, strategic bombers can project power to distant points on the globe, sometimes well before the arrival of other conventional forces. They also can conduct surveillance, minelaying, and antiship warfare operations in support of general-purpose naval forces.

Bomber Modernization -- Our bomber modernization programs are designed to use our technological advantage to render Soviet defenses obsolete. Today's force of B-52 and FB-111 bombers has provided a credible deterrent for some time. As Soviet air defenses become more formidable, the B-52s are increasingly less able to survive as penetrating bombers. As part of the President's strategic modernization program, we modified 90 B-52Gs to carry cruise missiles; all of these are now operational. Additionally, beginning in 1985, we began converting our 90 B-52Hs to carry cruise missiles. In 1986, we will begin deploying the B-1B while continuing the B-52H modifications. Toward the end of the decade, the B-1B will become our primary penetrating bomber. The program remains ahead of schedule and within budget, the first five planes having already been delivered.

Because Soviet defenses will improve further in the 1990s, the President's program also calls for development of an Advanced Technology Bomber (ATB). We have selected the prime contractor and key members of the ATB development team, and their work is progressing smoothly. While most of the details about this program are classified, the essential point is that the ATB will use low-observable techniques to negate present and projected Soviet air defenses.

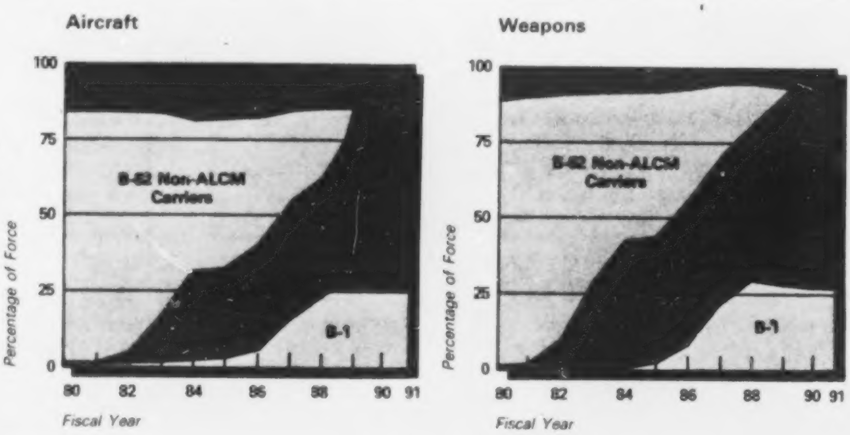
ATB technologies represent a major advance of extraordinary military significance.

In addition to the new bombers, we are developing two new bomber-delivered weapons: the advanced cruise missile (ACM) and the short-range attack missile (SRAM II). The ACM will have a greater range than the current cruise missile and will incorporate low-observable technology. Its longer range offers two advantages: B-52s will be able to stand off farther from Soviet defenses and still put distant targets at risk, and the missile itself could circumnavigate some air defenses. Its low-observable design will enhance the missile's ability to penetrate highly defended areas.

The number and types of bombers and bomber-delivered weapons in the program are summarized in Chart III.B.4.4.

Chart III.B.4.4

Bomber Force Modernization



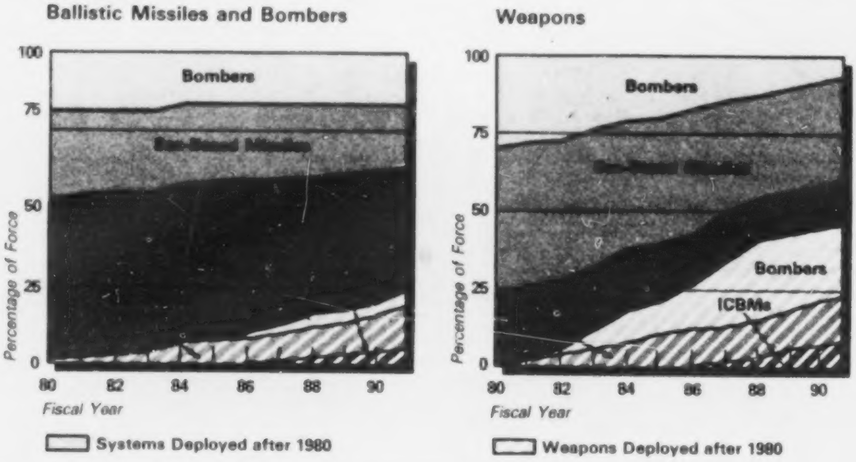
Aerial Tankers -- Aerial refueling is essential to all bomber missions, strategic or conventional. It allows bombers to reach more distant targets, carry heavier payloads, cover greater distances at lower altitude, and fly around enemy air defenses. Tanker forces also provide refueling support for Air Force, Navy, and Marine tactical fighters, cargo aircraft, NATO aircraft, and airborne command posts; they also can serve as transport aircraft. To meet these varied and sometimes simultaneously occurring demands, we are expanding our aerial refueling capability by modernizing existing KC-135As with CFM-56 engines and associated support systems -- the KC-135R program -- and by purchasing new KC-10 cargo/tanker aircraft.

When completed, the KC-135 reengining program will increase the fleet's refueling capability by approximately 50 percent, while reducing operating and maintenance costs. With this modification, the fleet will be able to remain in service well into the next century. The FY 1987 budget includes funds to buy support equipment and engines for 50 aircraft.

Since the KC-10 is being purchased primarily to enhance airlift capabilities, it is discussed in more detail in Chapter III.C, Mobilizing and Deploying the Forces.

Chart III.B.4.5.

Strategic Forces Modernization



(d) Force Structure Modernization

Chart III.B.4.5 shows the changing composition of the strategic offensive forces during the 1980s. By FY 1991, modernized systems

	FY 1985 Actual Funding	FY 1986 Planned Funding	FY 1987 Proposed Funding	FY 1988 Proposed for Authorization
B-52 Bomber Modification				
Development:				
$ Millions	17.1	12.8	—	—
Procurement:				
$ Millions	457.7	416.2	413.4	387.5
B-1 Bomber				
Development:				
$ Millions	462.5	217.6	118.7	28.9
Procurement:				
Quantity	34	48	—	—
$ Millions	5,094.9	—	—	—
Air-Launched Cruise Missile				
Development:				
$ Millions	18.9	10.9	6.1	—
Procurement:				
Quantity	—	—	—	—
$ Millions	77.3	32.6	12.4	2.5
KC-135 Mod				
Procurement:				
$ Millions	786.6	902.5	1,077.4	982.7

will constitute almost 25 percent of our operational ballistic missiles and bombers and about 45 percent of our strategic weapons.

(2) Strategic Defensive Forces

We have made significant advances over the last five years in revitalizing our strategic defensive forces. The FY 1987 program carries forward these trends, making long-overdue improvements in the nation's strategic defenses. It updates the air surveillance radars that watch for intruders into North American airspace. It modernizes the interceptor squadrons assigned to the North American air defense mission. It strengthens space surveillance and ballistic missile warning capabilities. It provides for continued development of anti-satellite weapons. And finally, as the centerpiece of strategic defense, the budget continues to support a major research program that is investigating various ways of defending against ballistic missiles.

(a) Strategic Defense Initiative (SDI)

The SDI program was established by the President in 1983 to explore advanced technologies offering the potential for creating highly effective defenses against ballistic missiles launched at the United States or its allies. Such defenses might at first reduce, and ultimately eliminate, the utility of offensive ballistic missiles. It is vital to the future well-being of our nation and its allies that we confer on this initiative a high priority. The SDI program is discussed in detail in Chapter III.C.1.

(b) Air Defenses

We are continuing to replace our aging air defense forces. Improvements in this area are needed to cope with the threat posed by new Soviet bombers and cruise missiles. The Soviets are about to deploy a new intercontinental bomber, the Blackjack, that will complement the long-range Bear-H and the Backfire, already in service. Both the Bear H and the Blackjack are capable of launching long-range cruise missiles against North American targets. At sea, a new submarine-launched cruise missile has just completed testing and could soon be deployed aboard several classes of Soviet attack submarines.

To counter this growing threat, we are installing new air surveillance radars, modernizing the interceptor force, and increasing funding for research into advanced air defenses.

Surveillance Systems -- The air defense radars now monitoring our borders would not likely detect low-flying bombers or air- and sea-launched cruise missiles. To provide such coverage, we are deploying a network of Over-the-Horizon Backscatter (OTH-B) radars. These long-range radars will be able to spot even low-altitude bombers as far away as 1,800 miles from the U.S. coastline. Radars for the three 60° sectors covering approaches to the east coast have already been procured, and one of three radars for the west coast was funded in the FY 1986 budget. We are asking for funds in FY 1987 to procure the last two radars for the west coast. Ultimately, we plan to deploy twelve OTH-B sectors to provide full coverage of the continental United States and Alaska.

While OTH-B radars can provide long-range surveillance to the east, west, and south, their capabilities are limited when looking northward. (This is because the radars "see" incoming objects by reflecting a high-frequency beam off the ionosphere, which is disturbed by the aurora borealis.) To provide continuous radar coverage to the north, we and our Canadian NORAD partners are replacing the now-obsolete Distant Early Warning (DEW) line with a network of microwave radars, called the North Warning System. The system will consist of 13 long-range, low-maintenance radars, interspersed with 39 short-range, unmanned radars to fill in the gaps in low-altitude coverage. The long-range segment of the network has already been procured, and the FY 1987 budget includes funds to continue development of the short-range installations. A negotiated agreement between the United States and Canada has succeeded in sharing equitably the cost to deploy and operate the system.

Interceptor Forces -- The interceptor force currently consists of 15 squadrons (four active and eleven Air National Guard) that maintain aircraft on ground alert at U.S. airfields. In times of crisis, these forces would be brought to an even higher state of alert, dispersed, and augmented by other available aircraft. Their primary mission in peacetime is to intercept and identify unknown aircraft approaching North American airspace; during a war, they could also provide a limited defense against bombers and cruise missiles.

We have completed modernizing three of the four active squadrons with F-15 interceptors. To ensure that we are obtaining the most effective interceptor force at the lowest cost, we are planning to hold an open competition for production of replacement aircraft for the Air National Guard squadrons. As a cost-saving measure, we will disestablish the fourth active air defense squadron in FY 1987. Its loss will be offset by having some Air National Guard squadrons man additional alert sites. Thus, at the end of our program, we will have a slightly smaller but completely modernized interceptor force for strategic air defense.

Advanced Research -- The SDI research program is examining options for effective ballistic missile defenses; corresponding options for highly effective air defenses will also be needed. Because of projected improvements in future Soviet strategic air forces, it is unlikely that highly capable air defenses could be achieved solely by upgrading programmed forces. Therefore, we are augmenting our air defense research program. The program will draw on some of the technologies being investigated as part of the SDI effort and extend research into new air defense technologies not covered by the SDI.

This program, for which we are requesting $62 million in FY 1987, includes research into new surveillance systems, weapons and weapon carriers, fire control and homing sensors, battle management and C^3 systems, and survivability measures.

(c) Space Defense

The antisatellite (ASAT) program is our primary effort to improve defensive capabilities in space. Its successful completion will deter the Soviets from using their ASAT weapons, which are already operational, while denying them unrestricted use of space for such threatening actions as targeting U.S. forces in wartime.

The ASAT missile, also known as the Air-Launched Miniature Vehicle (ALMV), is designed for use against low-altitude satellites. It will be carried by F-15 aircraft specially equipped for the ASAT mission.

The first test of the ALMV against an object in space was a complete success. The funds requested for FY 1987 will be used to continue the research, development, test, and evaluation phase of the ASAT program and to begin long lead-time material procurement. The program will be conducted consistent with congressional restrictions on testing.

The FY 1987 budget also includes funds to continue work on a space surveillance system to detect threats against U.S. space systems and to monitor Soviet satellites. This system of five ground-based electro-optical sensors will complement existing radars in detecting, tracking, and identifying objects in deep space. In FY 1987, the fourth electro-optical sensor will become operational and work will continue on the fifth site.

	FY 1985 Actual Funding	FY 1986 Planned Funding	FY 1987 Proposed Funding	FY 1988 Proposed for Authorization
Strategic Defense Initiative				
Development				
$ Millions	1,397.3	2,759.2	4,802.6	6,290.7
Air Defense				
Development				
$ Millions	102.9	105.6	52.9	77.2
Procurement				
$ Millions	140.1	181.9	192.5	262.9
Space Defense				
Development				
$ Millions	197.8	199.5	278.0	226.2
Procurement				
$ Millions	22.2	10.1	33.4	333.7

(3) Strategic Command, Control, and Communications (C^3)

Deterrence requires that strategic C^3 systems be sufficiently effective, reliable, survivable, and redundant to ensure that the National Command Authorities (NCA) receive timely warning of an attack and have an assured means of passing retaliatory orders to our strategic forces. Strategic C^3 systems are also vital to maintaining control over nuclear reserve forces following an attack. The FY 1987-91 program will improve each element of the strategic C^3 system: warning sensors, command centers, and communications systems.

(a) Missile Warning and Attack Assessment Sensors

The survivability of bombers and airborne command posts on ground alert depends on early warning of an attack. Similarly, the President must receive warning in time to consider retaliatory options; he also needs accurate information on the size and scope of an attack in order to select an appropriate response and to control escalation. Satellites would provide the initial indications that an attack was under way, and ground-based radars would confirm the satellite warning data. Both of these components of the missile warning network are being modernized.

Satellite Early Warning System -- Early warning satellites detect ICBM and SLBM launches. As currently deployed satellites reach the end of their useful service life, we are replacing them with new ones with improved survivability and performance features.

PAVE PAWS -- The PAVE PAWS phased-array radar system complements our satellite warning systems and confirms warning of SLBM attacks. The two operational radars on our eastern and western coasts monitor regular Soviet SSBN operating areas. When the two new PAVE PAWS radars -- one in Georgia and the other in Texas -- become operational in FY 1987, we will have closed coverage gaps to the southeast and southwest of our borders and will be able to shut down the aging FSS-7 radar in Florida. With FY 1987 funding, we will also begin increasing the power of the southeast and northwest radars to extend their range and will acquire new data processing equipment at the northeast and northwest sites for system-wide commonality. On completion of the southeast power upgrade, we will shut down the aging FPS-85 radar in Florida. The Perimeter Acquisition Radar Attack Characterization System (PARCS), a phased-array radar in North Dakota, completes our network of SLBM warning radars and also augments the BMEWS network, discussed below.

Ballistic Missile Early Warning System (BMEWS) -- BMEWS radars in Greenland, Alaska, and England would confirm satellite warning of an ICBM attack. Because these radars are expensive to operate and have difficulty distinguishing among large numbers of targets with small radar cross sections, they are being modified with phased-array radars similar to PAVE PAWS. The improved radar at Thule, Greenland, will become operational in FY 1987. The FY 1987 program continues a similar major upgrade at Fylingdales, England, with completion scheduled for FY 1990. In addition to its ICBM-related duties, the Fylingdales radar will improve warning of missile attacks against Western Europe and of SLBM attacks against the United States, while enhancing surveillance of objects in space.

Nuclear Detonation Detection System (NDS) -- To improve our ability to detect and locate nuclear detonations worldwide, we are installing new, more accurate sensors on the satellites of the Navstar Global Positioning System. In a nuclear war, the NDS would determine which targets had been destroyed and would assist in the selection of an appropriate response; in peacetime, it will contribute to nuclear test ban monitoring. We have successfully completed the validation phase of the program; all of the developmental satellites have been launched. The FY 1987 budget supports continued production of the NDS sensors and development of the terminals, which will be installed in various command posts. The system is expected to be fully operational by the end of the decade.

(b) Command Centers

Command centers play a central role in the operation and control of strategic forces. Fixed centers would be our most capable command posts in the early stages of an attack; airborne command posts, more likely to survive an attack, would be a key element of the command structure during and after an attack. We are requesting funds in FY 1987 to continue programs to protect electronic equipment in both fixed and airborne command posts against electromagnetic pulse (EMP) effects. These command posts will also receive more capable automatic data processing equipment.

(c) Communications

Communications systems connect warning sensors to command centers, enable information to be exchanged among command centers, and link the NCA with commanders and commanders with their forces.

Satellite Communications Systems -- The Air Force Satellite Communications (AFSATCOM) system provides low-data-rate links to the Strategic forces. The system consists of ultrahigh frequency (UHF) transponders deployed on a variety of host satellites and AFSATCOM terminals widely distributed among the forces and command centers.

The new Defense Satellite Communications System (DSCS)-III satellites will continue to replace DSCS-II satellites. DSCS-III will provide high-data-rate communications for the strategic forces as well as many other users. For example, the system would be used to transmit missile warning data to command centers and to connect the E-4B airborne command post to the bomber and ICBM forces. Compared with the DSCS-II system, DSCS-III communications are less susceptible to nuclear effects and are more jam resistant. In FY 1987, we will procure two DSCS-III satellites and continue efforts to lessen the susceptibility of the terminals to nuclear effects.

To meet our need for effective, continuous control of nuclear forces both during and after a Soviet nuclear attack, we are deploying the Milstar system. After warning sensors detected an attack, Milstar would provide secure voice communications among key command posts. Milstar terminals deployed with the forces will allow two-way communications with commanders, thereby increasing force effectiveness. Because the satellites will operate at extremely high frequencies (EHF), the system will be considerably less susceptible to the effects of nuclear detonations and jamming than either the AFSATCOM or DSCS-III systems. We are requesting funds in FY 1987 to start construction of the third development satellite, to procure long-lead items for the fourth development satellite, and to continue development of the terminals.

Ground Wave Emergency Network (GWEN) -- The purpose of the Ground Wave Emergency Network is to provide an EMP-resistant communications system to carry warning data to the NCA and retaliatory orders from the NCA to our forces. When the first phase is operational in FY 1987, GWEN will be our only EMP-hardened communications system serving both of these critical NCA requirements. It will increase our confidence that the links between sensors, the NCA, and bomber and tanker bases cannot be disrupted by EMP effects. The second phase of the program will add more transmitters and receivers, and provide an EMP-hardened link to the ICBM force. We expect to procure about 50 more nodes for the network in FY 1987 and to complete the system by the end of the decade.

Miniature Receiver Terminal (MRT) -- To improve communications with strategic bombers in flight, we plan to equip them with miniature terminals for receiving very low frequency (VLF) communications. Though slower than transmissions in the higher frequency bands, VLF communications can be transmitted over much greater distances than can line-of-sight communications, and they are much less susceptible to nuclear effects than are existing satellite and high frequency (HF) communications. We plan to complete flight tests of the terminals in FY 1987 and to begin producing them in early FY 1988.

TACAMO E-6A Aircraft -- To communicate with ballistic missile submarines, the Navy keeps special radio-relay aircraft continuously airborne over the Atlantic and Pacific. These planes, called TACAMO, transmit messages in the VLF band. In FY 1989, we will begin replacing the EC-130s (modified C-130 transports) now flying the TACAMO mission with the faster and longer-range E-6A, a derivative of the Boeing 707. At the same time, we will be outfitting the SSBN force with improved VLF receivers. The E-6A's ability to operate over vast expanses of the ocean will permit SSBNs to expand their operating areas and still receive messages from the NCA. Building toward a fleet of 15 E-6As, we are requesting funds to procure the third, fourth, and fifth production aircraft in FY 1987. Though the planes will be outfitted initially with communications equipment transferred from EC-130s, they will eventually carry an improved VLF communications system that offers better performance.

Extremely Low Frequency (ELF) Communications -- Submerged submarines must now deploy an antenna at or close to the ocean's surface to receive messages, thus potentially increasing their susceptibility to detection. The use of ELF communications, which can penetrate to great depths, will alleviate this constraint. The ELF communications system will consist of two transmitter sites (in Wisconsin and northern Michigan), operating in electrical synchronism, and receivers aboard submarines. The ELF system's high reliability and continuous transmissions will significantly upgrade peacetime communications to deployed submarines and support the transition to wartime operations. We are installing receivers in some submarines this year so that the full system can be tested in FY 1987. We are requesting funds for FY 1987 to procure receivers for other submarines. The system should be fully operational by the end of FY 1988.

	FY 1985 Actual Funding	**FY 1986 Planned Funding**	**FY 1987 Proposed Funding**	**FY 1988 Proposed for Authorization**
Strategic Surveillance and Warning				
Development: $ Millions	137.8	130.6	226.7	167.5
Procurement: Millions	178.4	365.7	644.7	528.9
Strategic Command Centers				
Development: $ Millions	289.4	313.8	485.7	501.6
Procurement: $ Millions	40.5	78.4	70.7	57.6
Strategic Communications				
Development: $ Millions	901.1	948.9	1,299.4	1,127.5
Procurement: $ Millions	252.6	189.2	279.9	84.0

d. FY 1987-91 Programs for the Nonstrategic Nuclear Forces

Our programs for the nonstrategic nuclear forces are designed to maintain an effective worldwide deterrent. These programs include modernizing our inventories of tactical nuclear bombs, nuclear artillery, and sea-based missiles, and improving the C^3 systems that support them. Our highest-priority program remains the implementation of the 1979 NATO dual-track decision on longer-range INF missiles. This decision allows NATO to reduce its overall nuclear stockpile but only if the remaining stockpile of weapons were modernized and made survivable.

(1) Longer-Range INF Missiles

In 1979, NATO decided to deploy Pershing II and ground-launched cruise missiles (GLCMs) in Europe in order to fill a gap in the alliance's spectrum of deterrence, a gap exacerbated by the ongoing deployment of Soviet SS-20 missiles. Initial deployment of Pershing IIs and GLCMs began in late 1983 and has proceeded on schedule at a gradual but steady pace. All 108 Pershing IIs and 464 GLCMs are scheduled to be deployed in Belgium, Italy, the Netherlands, the United Kingdom, and West Germany by the end of 1988.

As we proceed with these deployments, we remain committed to arms reduction negotiations. All of the deployments are subject to modification, cancellation, or reversal if an agreement with the Soviet Union is achieved.

(2) Short-Range Nuclear Forces

Short-range nuclear forces provide visible evidence of NATO's commitment to a forward defense of its territory. In the event of a Warsaw Pact attack, the possibility of these weapons' use would inhibit the Pact from massing its ground forces to break through NATO's conventional defenses. If conventional defenses proved inadequate to stem the aggression, short-range nuclear forces could aid in maintaining a cohesive forward defense. Their widespread deployment enhances their survivability and contributes materially to the overall effectiveness of NATO's forces.

Modernization programs for the short-range forces center on the replacement of a significant portion of the 30-year-old W33 (8-inch) and 23-year-old W48 (155mm) nuclear artillery projectiles by the early 1990s. The W33 will be replaced by the W79, and the W48 by the W82. These extended-range projectiles -- enhanced for safety, security, and reliability -- will significantly improve our short-range nuclear forces. We are also evaluating product improvements to ensure the safety and reliability of those W48s and W33s that will remain in the inventory.

The FY 1987 budget continues development of the W82. (All DoD funds required for the W79 program have already been appropriated.) Consistent with congressional direction, all W82s, and those W79 rounds produced from FY 1985 on, will not be of the enhanced radiation type. Consistent with the recommendations of the Supreme Allied Commander Europe on implementation of NATO's October 1983 Montebello Decision, all atomic demolition munitions were withdrawn in 1985 from the NATO stockpile in Europe. In addition to the reduction called for by the Montebello Decision, SACEUR has called for and NATO is pursuing a number of programs to enhance the survivability of remaining weapons.

(3) INF Aircraft

NATO relies on a variety of dual-capable aircraft for nuclear air attack missions. The U.S. component of the force is being modernized with F-16s and F/A-18s, while the NATO allies are adding both Tornados and F-16s to their forces. At the same time, the nuclear munitions available for delivery by both U.S. and allied air forces are being improved in effectiveness, safety, security, and survivability. New storage and transport concepts are being evaluated to determine the most cost-effective means of ensuring the security and survivability of NATO's aircraft and munitions.

(4) Sea-Based Systems

The United States also deploys dual-capable weapons systems aboard a wide variety of ships. In addition to deterring Soviet first use of similar nuclear weapons at sea, U.S. nuclear antiair and antisubmarine weapons provide unique capabilities that serve as a backup for our conventional systems. Nuclear-capable carrier-based aircraft and nuclear Tomahawk sea-launched cruise missiles have three vital roles: contributing to our nuclear reserve force; providing a worldwide deterrent presence; and deterring attacks on our naval forces by Soviet nuclear antiship missiles (especially those aboard Backfire and Badger bombers). U.S. sea-based nuclear forces, along with our land-based forces, support our policy of confronting the Soviet leadership with uncertainty and risk should they contemplate a nuclear war at sea.

The FY 1987 budget supports continued production of the nuclear version of the Tomahawk sea-launched cruise missile. It also provides research and development funds for three new sea-based systems: a significantly improved gravity bomb for carrier aircraft; a new series of antisubmarine weapons; and a nuclear warhead for the SM-2 surface-to-air missile. All of these weapons are projected for deployment beginning in the early 1990s.

(5) C^3 Support for the Nonstrategic Nuclear Forces

Work is progressing on two new communications systems for the nonstrategic nuclear forces in Europe and the Pacific. The first system will link via UHF satellite the command headquarters with their deployed forces. A UHF satellite system is fully operational in the Pacific, and the European UHF system will be completed in FY 1987. The second new system, an HF network, is scheduled for completion in Europe and a portion of the Pacific during FY 1989. This network will provide reliable and secure HF channels over which commanders can communicate with their forces. The HF system is designed to be highly resistant to electronic jamming and to withstand the EMP effects of a nuclear blast. Full-scale production of HF system components is to begin this fiscal year. Plans call for the initial stage of the Pacific HF system to be extended to all the nonstrategic nuclear forces assigned to the Pacific Command.

e. Conclusion

We are pursuing two goals as we implement the nuclear modernization program and the Strategic Defense Initiative. First, we are establishing a stable and credible deterrent to aggression. At the same time, we are increasing incentives for the Soviets to stay at the bargaining tables to negotiate significant arms reductions. Together, modernization and arms reductions will ensure a safer future for us and for our allies.

C. MOBILIZING AND DEPLOYING THE FORCES

1. Introduction

The people and dollars we devote to defense cannot be employed effectively without efficient processes for the rapid transition from peace to war -- mobilization -- and for the timely movement of forces to the battlefield -- deployment. Our ability to mobilize and deploy our forces rapidly is as important to our deterrence strategy as the warfighting capability of the forces themselves. Collectively, these two processes -- mobilization and deployment -- would directly influence the outcome of the first day of any future war, and in large part could determine the victor on the final day. Moreover, the perception of our capabilities with regard to these processes constitutes a key element in the overall deterrence equation.

In the early stages of past wars, we and our allies have endured combat setbacks and territorial losses while mobilizing our industry and creating the force structure required for victory. This bitter experience is the foundation of today's national strategy of maintaining the ability to conduct a forward defense of U.S. and allied interests against enemy aggression.

This strategy serves as a powerful deterrent to aggression. To support it, we maintain:

- An active force, including a considerable presence overseas, of sufficient size to prevail in small-scale conflicts and to serve as the vanguard of our response to large-scale aggression;

- A reserve force capable of mobilizing quickly in the face of the larger threat; and

- Projection forces capable of rapidly transporting our active and reserve forces to the location of a conflict.

Chart III.C.1
Soviet Geographic Advantage

Europe
Southwest Asia
Northeast Asia

The scenario used in sizing our forces is a worldwide conventional conflict with the Soviet Union and its allies. This scenario severely challenges our mobilization planning and deployment capabilities because it recognizes both the ability of the Warsaw Pact to launch a major attack on NATO with very little warning and the significant advantages the Soviets and their allies enjoy through their proximity to several critical theaters -- Europe, Southwest Asia, and Northeast Asia (see Chart III.C.1).

This threat is fundamentally different from the one we faced in World War II, when the United States began at a very low level of preparedness and had several years to build its military capability. It is also different from the situation we faced in Korea and Vietnam, where relatively small portions of our total force became involved. Today, we must be ready to bring to bear the bulk of our forces for a war that could arise on very short warning. This chapter describes the steps we are taking to ensure that we could mobilize and deploy our military forces quickly in an emergency; industrial mobilization efforts are covered in Chapter II-C, Readiness and Sustainability.

2. Military Mobilization

Mobilization encompasses a wide range of activities, including the transition of our military and civilian work forces from a peacetime to a wartime footing and the surging of our industrial base to produce the additional materiel needed in a war.

a. Force-Mix Implications of Military Mobilization

The total force is often thought of only in terms of the Active and Reserve Components, but in reality it also encompasses retired military personnel and the civilians and contractors who work for DoD. In this period of declining youth populations and funding constraints, we need to obtain the best possible mix of all these assets.

b. Mobilization Manpower Assets

The Reserve Components are a key element of the total force, and we are working hard to make the fullest use of them in our mobilization planning. In the event of a war, these forces would deploy alongside Active Component units; their missions demand that they be as capable and ready as their active-duty counterparts. By placing a substantial amount of capability in the reserves, we can hold down the size of our standing forces, and so reduce total operating costs.

In deciding on the proper mix of active and reserve forces, we must, of course, consider more than cost. We must also consider overseas deployments and peacetime missions for which, in many cases, part-time reserve forces are not appropriate. We must ensure there are sufficient Active Component forces on hand to reinforce our forward-deployed units in the early stages of a war, or to deploy to troublespots where U.S. forces are not stationed in peacetime. Each decision about the force mix must be addressed on its own merits, and from a long-term planning and funding perspective. With that in mind, we will continue to work to achieve the optimum active/reserve mix.

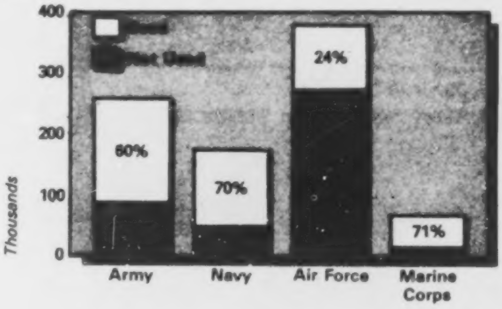
During a mobilization, the Individual Ready Reserve (IRR) would be used to bring both active and reserve units to their authorized wartime strength, to replace untrained or partially trained unit members, and to replace initial casualties. The new eight-year military service obligation, in conjunction with enlistment and reenlistment bonuses and more intensive management procedures, is projected to produce an IRR strength of about 650,000 by 1990. However, the longer service obligation will also increase the average length of time many IRR members go without training. Consequently, we have decided to conduct an annual screening to help determine IRR members' skill proficiency, refresher training needs, and mobilization readiness. Annual screenings will also help us keep track of any changes in the members' personal status. These and other initiatives designed to ensure that the IRR will be a useable wartime asset are discussed in greater detail in Chapter III.A, Manning the Force.

It is the department's basic policy to rely increasingly on federal civilian employees and private-sector contractors for services not requiring military personnel. Most of these people provide services related directly to the readiness of operational forces. Large numbers are employed in such fields as logistics, communications, medicine, and equipment maintenance. Because many of them occupy positions overseas that are essential to wartime operations, we have recently taken steps to ensure that they would remain available in an emergency. We are also continuing to increase the size of the civilian work force and to expand our reliance on private-sector contractors so as to free additional military personnel for combat units, thereby reducing active manning requirements.

During the early stages of a major conflict, we would also make extensive use of military retirees for a variety of training and support functions. These well-schooled, multitalented people constitute a pool of trained individuals who are not currently members of either the active force or the Selected Reserve, but who have prior military experience. By law, they can be recalled to active duty by their respective Service secretaries for use as fillers to bring units to wartime strength, to expand the continental United States (CONUS) support base, or to perform other functions in the interest of national defense.

The objective of our management efforts is to ensure that all physically qualified military retirees under age 60 whose skills match a mobilization requirement are preassigned in peacetime to

Chart III.C.2
Retired Manpower Yield — FY 1987



mobilization billets or stations. The Army has already issued preassignment orders to over half its eligible retirees. The Marine Corps has preassigned a small percentage of its retirees, but can link the remainder of its retiree force to vacant wartime positions through automated data systems. The Navy is just beginning the process of matching existing assets with mobilization billets, and the Air Force plans to use retirees selectively only after announcement of a mobilization. The military departments are improving their ability to manage and mobilize this valuable source of highly trained people. Chart III.C.2 illustrates the results of Service efforts to date.

Although significant progress has been made in the total force arena, we are continuing to explore ways to shift appropriate functions to the Reserve and Civilian Components while also increasing our reliance on military retirees.

c. Wartime Manpower Planning System (WARMAPS)

WARMAPS was developed to provide a consistent methodology for establishing time-phased military and civilian manpower requirements and for identifying specific shortfalls during mobilization. The military manpower portion of the system has been in operation since 1979, and the civilian subsystem since 1981. WARMAPS has pinpointed when the Services would experience their peak military manpower shortfalls during a mobilization and highlighted critical skill shortfalls.

Table III.C.1

Wartime Military Manpower Needs at Peak Shortfall

(Strength in Thousands)

	Demand	Supply	Peak Shortfall
Army	2,270	2,198	− 72 at M + 90
Navy	881	852	− 29 at M + 30
Air Force	924	888	− 35 at M + 30
Marine Corps	443	439	− 4 at M + 150
Overall DoD	**4,118**	**3,989**	− 129 at M + 30

Source: WARMAPS FY 1987 POM.

Another of its major uses has been to identify the locations and skills of civilian workers the Services would have to recruit to meet wartime needs. Tables III.C.1 and III.C.2 display current WARMAPS data for military and civilian manpower based on a worldwide war of 180 days' duration.

Table III.C.2

Wartime Civilian Manpower Needs Shortfall at M + 30

(Strength in Thousands)

	Demand	Supply	Required New Hires
Army	442	284	158
Navy	327	253	74
Air Force	216	200	16
Marine Corps	23	17	6
Def Agencies	85	85	0
DoD Total*	1,093	839	254

Source: WARMAPS FY 1987 Program.

*Numbers do not add due to rounding.

We have made good progress over the past few years toward alleviating some of our most serious military manpower shortfalls. The Individual Ready Reserve (IRR) pool is better managed and more readily available. The Individual Mobilization Augmentees (IMA) program has been expanded. Thus, the shortfalls in the first 60 days of a war have been significantly reduced. Because of peacetime draft registration, a large output from the training base could be available beginning about 120 days after a decision to mobilize and begin inductions. Thus, shortfalls after this time period have also been reduced. The large and persistent shortfall across the middle of the scenario (from about M+60 to about M+120, before initial casualties could be replaced) has been only partly alleviated. We have initiated a number of programs (e.g., extension of the military service obligation from six to eight years, IRR enlistment and reenlistment bonuses) that we estimate will solve the remainder of our total military manpower shortfalls by the early 1990s. However, we will still face significant shortfalls in several critical skill areas (e.g., medical personnel, engineers, technicians, mechanics, and construction personnel).

WARMAPS has defined our civilian manpower shortfalls by size, occupation, and geographic location. We are taking steps to ensure that we could quickly recruit the large number of additional workers needed during a mobilization. We are working with industry to identify areas in which we would have to compete for people with critical skills; with the Services to facilitate the sharing and reallocation of resources; and with other agencies to identify additional resource pools (e.g., civil service retirees, National Defense Executive Reserves) from which civilian workers could be drawn.

d. Training Base

In the event of a mobilization, the strength of the military forces would need to be increased quickly. In addition to reservists and other pretrained military manpower, the Services would need to obtain many untrained individuals who, following initial training, could be assigned as replacements or fillers to existing or newly formed units. The Selective Service System is prepared to deliver inductees to the Armed Forces on a schedule based primarily on the capacity of the training base to absorb them.

In conjunction with the Army, we are reviewing our process for determining inductee delivery rates during a mobilization. The objective of this effort is to ensure that the right numbers and types of people would be available to meet wartime requirements. Additionally, we are expanding an existing Army training-base model for application in the other Services.

e. Exercises

Exercises remain our primary vehicle for evaluating and verifying our mobilization plans, policies, and procedures. We use them to identify major problems and deficiencies and to develop solutions. After the plans have been refined, we test them again and again in subsequent exercises to make sure they will work.

Since early 1981, we have devoted considerable effort to improving our ability to carry out a military mobilization. A prototype management tool, called the Crisis Management System, was tested in late 1982 during Exercise PROUD SABER. Based on the results of that test, a number of modifications were made to the system that will be evaluated and refined during forthcoming exercises.

This past fall, we conducted another in a series of national-level mobilization exercises -- PORT CALL. That exercise tested our decisionmaking process -- how well we could coordinate the many complex issues that would have to be presented for decision during a mobilization. Among the specific policies and procedures evaluated were the call-up of selective reserves, the draft, retiree recall, adequacy of the support forces and the industrial base, and recommending a decision to mobilize.

We are putting special emphasis on improving our ability to mobilize our civilian work force. In the 1982 TIDEWATER mini-exercise, we evaluated our ability to hire additional civilian workers to support a military mobilization. We learned that many civilian personnel offices were unaware of how many additional people they would have to hire, or that their installations even had a mobilization mission. Some installations were not familiar with the procedures by which they would have to communicate their civilian hiring needs to state and federal agencies who would aid in providing workers. Finally, some installations did not realize that they would have to compete with other installations and private industry for civilian workers.

A follow-on exercise conducted late last year -- the Bay Area Civilian Mobilization Mini-Exercise -- gave us a chance to measure our progress in correcting these problems. The San Francisco region was chosen because of its high DoD employment (about 43,000), substantial need for new civilian hires in wartime (approximately 16,000), and the presence of all the military departments and the Defense Logistics Agency. Twenty Bay Area installations participated.

While we found we had made significant progress on a number of fronts, the exercise highlighted some additional areas requiring improvement. We need to be more consistent in our estimates of needs; improve our procedures for reporting our requirements to the Department of Labor and the Office of Personnel Management; better coordinate our hiring needs among installations; and work more closely with defense industries with which we would have to compete for people with certain critical skills during a war.

f. Role of the Congress

The Congress has an important role in mobilization. A congressional declaration of national emergency or war is required before we can mobilize all of our reserves, or take a number of other essential mobilization steps. The Congress must also pass specific legislation before we can begin inductions. We have developed standby legislative packages for submission in an emergency.

A specific problem that has been uncovered in recent exercises concerns the need for state emergency forces to help defend U.S. territory in the event the National Guard is mobilized. These forces are not a part of the U.S. Armed Forces. They could be used to provide internal security, disaster relief, and protection from civil disorder. This requirement increases with the prospect of terrorist activity in the United States. As a result, we are submitting legislation that would authorize us to loan or issue military equipment to state defense forces.

3. Force Projection

a. Strategy and Missions

Our projection forces -- airlift, sealift, and prepositioning -- permit the deployment of combat forces when and where they are needed to protect our national interests.

To counter the growing ability of the Soviet-bloc nations to launch simultaneous offensives in Europe, Southwest Asia (SWA), and the Pacific region, our long-term goal is to be able to deploy forces to those areas simultaneously. Because the European and SWA portions of any such deployment would place the heaviest demands on our projection forces, our objectives for those regions are discussed in detail below.

(1) Europe

Rapid reinforcement is central to a successful defense of NATO. Because the Warsaw Pact maintains a large active military force along its borders with Western Europe, and the road and rail networks would support a rapid enemy buildup, NATO must be prepared to reinforce its in-place forces immediately upon receiving firm indication that a Pact buildup had begun. The timely arrival of reinforcing units from the United States would be key to an effective forward defense during the opening weeks of a war, when the risk of a Pact breakthrough would otherwise be high. Our initial reinforcements would include six Army divisions, 60 tactical fighter squadrons, and one Marine Amphibious Brigade -- all of which would have to be delivered to their combat positions, with support detachments, within 10 days of a decision to mobilize. Given the constraints of distance and timing, the forces would have to go by air, and draw on equipment that had been prepositioned for them in Europe in advance.

Once the initial reinforcements were in place, sealift would accomplish most of the remainder of the deployment. Because government-controlled and U.S.-flag shipping can fulfill only a portion of the requirement, we would also use ships from allied civil fleets. Our dependence on allied shipping to reinforce and resupply NATO would increase if we had to deploy forces simultaneously to one or more other theaters.

(2) Southwest Asia

The problems we would face in a SWA deployment differ from those of a NATO reinforcement in three respects: a Soviet threat to SWA would take longer to materialize because of the limited road and rail systems and the greater distances to be traveled; we have no forward-deployed forces in the region; and we, too, would have to contend with limited road and rail systems, as well as limited port facilities. A deployment to SWA would require moving our forces some 8,000 nautical miles by air (nearly double the distance to Europe) and more than 12,000 nautical miles by sea (more than three times as far as to Europe). At their destination, our troops would be operating from ports and airfields that lack the modern cargo-handling equipment found at European facilities. Moreover, since no U.S. combat units are based in SWA in peacetime, we would have to deploy an entire fighting force, with all of its support elements -- and do so very quickly. Although these objectives are challenging, they can be met with the planned improvements to our projection forces, if we have modest support from friendly nations in the region, and if we respond promptly to warning.

Our objective is to be able to deploy a major joint task force and its required support within six weeks of being asked for assistance. Establishing air defenses would have a high priority in the early stages of a deployment, as would securing and protecting ports and airfields. Airlift, combined with prepositioning, would deliver the forces needed to accomplish these tasks. Heavy combat and support forces would follow on fast sealift, with conventional sealift completing the deployment.

b. Contributions of the Various Force Elements

Force deployments have two segments: the intertheater movement of forces and materiel between major geographic regions, or "theaters," and their subsequent intratheater movement. Some aircraft and ships are designed to operate over only one deployment segment, while others can be effectively employed over both. Thus, our new FSS fast sealift ships are reserved for longer, intertheater transits, and our medium-range C-130 aircraft fly only intratheater missions. Amphibious ships, on the other hand, can move Marine forces both to theaters of operation and between operating locations within theaters. Similarly, the new long-range C-17 aircraft will be able to deliver forces over intercontinental distances directly to austere forward locations, thereby obviating the need for additional intratheater lift.

The following sections describe how the various elements of our projection forces would contribute to the movement of military troops and materiel in a deployment.

(1) Prepositioning

Prepositioning, whether ashore or at sea, can sharply reduce response times in the critical early stages of a deployment. For example, by storing the heavy equipment of mechanized divisions in Europe, we can cut each division's transit time from several weeks to two or three days, thereby meeting our early NATO reinforcement objectives.

Although land-based prepositioning programs do much to improve early combat capability, their contributions are restricted to the localities in which materiel has been stored. Prepositioning at sea offers greater flexibility, since ships can be moved from one region to another as the need arises. Sea-based prepositioning programs, therefore, contribute to our ability to deploy forces rapidly to threatened areas worldwide.

(2) Airlift

Airlift, our most flexible and rapid force-projection resource, would play a vital role in a wide range of deployments. In regions such as Southwest Asia, where we maintain only a limited military presence in peacetime, airlift would deliver the initial increment of combat forces. These forces -- comprising tactical air, air defense, and light ground units -- would be needed to establish a foothold and secure an area, including ports and airfields, for the arrival of follow-on forces. Airlift would also deliver our initial reinforcements to Western Europe in the event of a NATO/Warsaw Pact war.

It is simply too expensive to buy enough aircraft to transport heavier forces, such as mechanized and armored units, in the numbers needed for either a European or a Southwest Asian conflict. Yet we must be able to deploy such units quickly, particularly in a NATO reinforcement, given the heavily armored forces the enemy could bring to bear. This can be achieved only by combining airlift with extensive prepositioning.

The current airlift force includes 304 C-5 and C-141 long-range cargo aircraft, designed primarily to transport materiel to or between theaters of operation, and 44 KC-10 dual-role airlift and aerial-refueling aircraft. The recent activation of C-5 and C-141 units in the Air National Guard and the Air Force Reserve will maintain our mobilization capability while reducing peacetime flying costs and extending the service lives of the aircraft.

Another 518 aircraft of shorter range (C-130s) and some 700 helicopters (CH-46s, CH-47s, CH-53s, and CH-54s) contribute to our capability to move troops and supplies within theaters. In a major deployment, these forces would be augmented by aircraft from our civil fleet, which could contribute 227 passenger and 64 cargo aircraft through the Civil Reserve Air Fleet (CRAF) program.

(3) Sealift

Most Army and Marine Corps units without prepositioned equipment would deploy by sea. Amphibious forces and government-controlled ships maintained in a high state of readiness would be the first to depart. They would be followed by ships from the U.S.-flag fleet and, in a NATO or Korean conflict, by ships committed by our allies. Commercial ships in or near CONUS ports could be loaded quickly enough to take part in the initial deployment; ships at sea, which could take some time to return to port, would carry follow-on reinforcements.

As with airlift, we would combine prepositioning with sealift to shorten response times. Cargo-handling equipment and other items used to unload ships are prepositioned so that the first ships to arrive would have a full support capability awaiting them. Having these assets on hand would be especially important in deployments to regions such as Southwest Asia where port facilities are austere or have been damaged.

Approximately 90 dry cargo ships and 30 tankers are maintained under government control by the Military Sealift Command or by the Maritime Administration in the Ready Reserve Force. Most of these ships could be made available for sealift operations within five to twenty days of notification. Approximately 140 additional cargo ships are in the National Defense Reserve Fleet and could be readied for use within one to three months.

As with airlift, our military sealift forces would be augmented in a major deployment by ships drawn from the civil fleet. The U.S.-flag fleet could supply approximately 200 dry cargo ships and 120 tankers. Of these, about 140 cargo ships and 17 tankers could be made available by charter or government contract under the Sealift Readiness Program, which operates at no direct cost to DoD.

(4) Support at Intermediate Bases and Assistance from Allies

Access to intermediate bases would be important for any deployment, particularly one requiring a large amount of airlift. To move a large force quickly, we would need to make maximum use of the cargo capacity of our airlift fleet. Without access to intermediate bases for refueling, valuable cargo space would have to be sacrificed in order to carry more fuel, or an already overburdened aerial-refueling force would have to be pressed into additional service. Although the facilities we have received permission to use are adequate for day-to-day operations, many of them require upgrading or expansion to support the heavier airlift demands of a deployment.

The NATO nations and other allies have agreed to contribute a number of ships and aircraft for a U.S. reinforcement of their regions. The European allies have earmarked some 600 ships for this purpose -- the majority of the sealift capacity required for a NATO reinforcement. To augment our airlift force, the allies also would provide nearly 40 long-range cargo transports and a like number of passenger aircraft. Smaller numbers of ships and aircraft would be made available by the Republic of Korea for support of a Korean conflict. These commitments would both speed the arrival of U.S. troops and materiel and free some of our projection forces for use elsewhere.

c. Recent Advances and the Current Program

While our force-projection capabilities were substantial when this decade began, we could not have moved large forces quickly enough to deter Soviet aggression with reasonable confidence, nor could we have deployed major forces to two or more theaters simultaneously. Moreover, we lacked the ability to unload the full range of ships needed to move materiel into less-developed regions. Since 1981, we have made great progress in redressing these deficiencies, adding substantially to our airlift and sealift capacity and prepositioning additional large quantities of materiel abroad.

FY 1986 and FY 1987 will mark the full achievement of major improvements in our force projection capabilities. In FY 1986, we will bring the Maritime Prepositioning Ship (MPS) program fully on line, and complete our Fast Sealift Ship (FSS) program. These programs, together with the improvements made possible in our wartime airlift utilization rates by airframe modifications and expanded stocks of spare parts, greatly increase our ability to deploy large, heavily armed forces rapidly.

The procurement programs for C-5 intertheater heavy-lift aircraft and KC-10 tanker/transport aircraft will be completed in FY 1987 -- reaching the first plateau for expansion of our airlift capability. Additionally, over one million ton miles per day (MTM/D) of cargo capability will be added in FY 1987 through the modification of commercial aircraft under the CRAF Enhancement program. This will bring our total intertheater airlift capability to 46 MTM/D -- over 50 percent more than the 30 MTM/D we had in FY 1981. Further improvements through the C-17 program will bring us to our goal of 66 MTM/D by the turn of the century.

FY 1988 will see the completion of improvements in the Ready Reserve Force and in the ability of the U.S.-flag fleet to contribute to wartime operations. Together with the MPS and FSS programs, these improvements will have more than tripled our sealift capacity since 1981.

The programs described in the remainder of the chapter will bring us far closer to our goal of a fully capable, flexible projection force.

(1) Prepositioning Programs

Over the next five years, we will be adding to our stocks of prepositioned equipment in Europe, while completing a major sea-based program that will enhance our rapid-response capabilities worldwide.

(a) Europe

Prepositioning of U.S. equipment in Europe began in the 1960s in response to U.S. and European concerns that the forces available in the theater in peacetime were inadequate to meet a mobilized Warsaw Pact threat. Since that time, the Pact has increased the size and effectiveness of its forces. As a result, the need for rapid deployment of heavy, mobile forces is at least as great today as it was when the prepositioning program was first proposed.

Under the POMCUS (Prepositioning of Materiel Configured to Unit Sets) program, the Army stores heavy items of equipment -- such as tanks, personnel carriers, and trucks -- in dehumidified warehouses in Europe. The equipment is arranged in unit sets, ready to be moved rapidly out of storage to marshalling areas. This means that only the troops themselves, their personal equipment, and any remaining materiel not suitable for prepositioning -- such as helicopters and electronic gear -- would have to be airlifted to the theater at the outbreak of a crisis. On arriving in Europe, the forces would be trucked to the marshalling areas, where they would pick up their prepositioned equipment, assemble into units, and move forward.

We are committed to provide POMCUS equipment for a total of six U.S.-based Army divisions and supporting units. Four division sets are already in place, and work on the remaining two is under way. New facilities for the fifth and sixth sets in Belgium and the Netherlands became available in 1985 under the NATO Infrastructure program. The first of the new warehouses began receiving equipment last summer. With continued congressional support, we plan to move additional equipment into this newly available storage.

The Air Force also is prepositioning equipment and consumable materiel in Europe to support its in-place and reinforcement squadrons committed to NATO. The materiel in storage ranges from engineering, ground support, and medical equipment to munitions, spare parts, and fuel.

The Marine Corps has begun a land-based prepositioning program in Norway to support a Marine Amphibious Brigade (MAB). Currently, some equipment is in temporary storage. All of the materiel will be prepositioned when NATO-funded permanent storage facilities are completed. The latter construction programs began in FY 1985 and will be concluded by late 1989.

(b) Southwest Asia

Our prepositioning efforts in SWA serve three main objectives: they permit forces to be deployed rapidly to the region; they provide the materiel needed to unload ships in austere ports; and they provide supplies and ammunition to cover expected consumption until sealift can meet demands. We are making extensive use of sea-based prepositioning in the region because we lack land-based sites and because sea-basing provides flexibility to meet the variety of contingencies we might encounter in SWA or elsewhere.

By the end of FY 1985, our prepositioning program for SWA had provided 16 prepositioning ships carrying more than 165,000 short tons of Army, Air Force, and Marine unit equipment and supplies.

(c) Access to Foreign Facilities

We have reached formal agreement with several nations, and are seeking permission from others, to preposition materiel and conduct routine training exercises during peacetime, and to use their facilities during crises. In some cases, it has been necessary to improve existing facilities. These projects were initially funded in FY 1980 and FY 1981, and most will be completed by the end of FY 1987.

By agreement with the United Kingdom, we have enlarged the airfield at Diego Garcia to increase its capacity to support refueling, and have also improved the port facilities. Facilities at Lajes Air Base in the Azores are being upgraded, and we have received Portugal's approval to provide for additional fuel storage at the base. These programs enhance our ability to deploy forces rapidly in a crisis as well as support routine peacetime operations.

(2) Airlift Programs

The FY 1987-91 program continues to give high priority to increasing airlift capacity. By the end of the decade, we will have added 48 C-5Bs and 60 KC-10s to the intertheater fleet and started procuring a major new transport aircraft. As these programs move forward, we will continue to improve the performance of existing aircraft by increasing the cargo contribution of the civil fleet and extending the service life of the military fleet.

(a) Expansion of Airlift Capacity

The C-5B increases our ability to move "outsized" equipment, such as tanks, self-propelled howitzers, surface-to-air missiles, and helicopters. These items would have to be dismantled to be carried by smaller aircraft in military or civilian use, and then reassembled upon arrival in the combat theater -- a time-consuming process that would slow a deployment and introduce significant risks. This problem would be particularly severe in a NATO reinforcement, given the large amount of outsized cargo that would have to be moved within the first 10 days.

The KC-10 adds a new dimension of flexibility to our airlift force because it can operate as a transport aircraft or a tanker, or as both simultaneously. In a NATO reinforcement, it would probably be employed as a transport aircraft for moving bulk and "oversized" cargo. In deployments to other regions, where access to intermediate bases for refueling might be limited, it could be used as a tanker for refueling C-5s and C-141s, or it could operate in a mixed role, carrying fuel for fighters and a limited amount of cargo.

Under the CRAF Enhancement program, we are adding "cargo-convertible" features to 19 wide-bodied passenger aircraft that would be used for military airlift operations during a national emergency. The modifications will enable the planes to be converted to carry military cargo. This program will increase the cargo contribution of the civil fleet by more than 30 percent, while avoiding the cost of acquiring and operating additional military transports of comparable capability.

Although these programs will significantly increase our intertheater airlift capacity, they cannot meet our long-term goals. Consequently, the FY 1987 budget includes a request for funds to continue full-scale engineering development of the C-17 cargo aircraft, working toward a production start in FY 1988. Though smaller than the C-5, the C-17 will be able to carry the full range of military equipment, including all armored vehicles and most other outsized cargo. Unlike other intertheater transports, it will be able to use austere airfields, thereby increasing the amount of cargo that can be delivered directly to operating forces. After its intertheater mission is completed, the C-17 also could be used to augment the C-130 force in moving troops and materiel within theaters.

(b) Improvements to Existing Aircraft

To meet our airlift objectives, we must improve our existing airlift forces as well as acquire additional lift capacity. Programs in this area provide two main types of improvements: aircraft modifications, to fix structural problems or extend service lives; and increases in spare parts stocks, to raise wartime utilization rates.

Intertheater Airlift -- We have nearly completed a major modification program for the C-5A fleet, correcting structural deficiencies in the planes' wings. Upon the program's completion in FY 1987, all 77 C-5A aircraft in the fleet will be able to remain in service well into the 21st century.

We are continuing to build our inventories of spare parts for the C-5A and C-141 fleets. Adequate amounts of these items must be maintained in peacetime if our aircraft are to achieve and sustain their planned surge rates in a crisis.

Intratheater Airlift -- In FY 1984, we began modifying the wings of older-model C-130 aircraft to repair corrosion damage and to correct problems caused by stress. The modifications to the "A" models will be completed during regularly scheduled depot maintenance periods in FY 1986; work on the other models will be completed in FY 1989. With these refurbishments, the "A" models will be able to remain in service through the mid-1990s, and the later models into the next century.

	FY 1985 Actual Funding	FY 1986 Planned Funding	FY 1987 Proposed Funding	FY 1988 Proposed for Authorization
C-5				
Procurement:				
Quantity	8	16	21	—
$ Millions	1,722.8	2,158.6	1,953.8	—
KC-10				
Procurement:				
Quantity	8	12	8	—
$ Millions	601.5	486.7	104.4	—
CRAF Enhancement				
Procurement:				
Quantity	—	—	—	—
$ Millions	128.9	158.8	—	—

	FY 1985 Actual Funding	FY 1986 Planned Funding	FY 1987 Proposed Funding	FY 1988 Proposed for Authorization
C-17 Cargo Aircraft				
Development:				
$ Millions	120.0	372.8	612.3	901.9
Procurement:				
Quantity	—	—	—	2
$ Millions	—	—	217.3	1,382.8

(3) Strategic Sealift Programs

Sealift is vital for projecting and sustaining the full range of combat and support forces. In a major deployment, it would deliver most of our forces and cargo, including much of the nonprepositioned equipment for heavy divisions and support units, as well as the bulk of our ammunition and other supplies.

(a) Maritime Prepositioning Ships

The Maritime Prepositioning Ship (MPS) program provides one of our most dramatic improvements in rapid force projection. Thirteen chartered ships are loaded with equipment and supplies for three Marine Amphibious Brigades, each capable of conducting highly mobile mechanized operations. The ships are maintained at locations from which they could depart for troublespots on very short notice. The troops themselves and any residual equipment would be airlifted to the theater, where they would draw their combat gear from the MPS. Once unloaded, the ships could be used to meet tactical (intratheater) or strategic sealift requirements.

The first MPS squadron went on station in the Atlantic in 1985. A second squadron deployed to the Indian Ocean in late 1985, and the third will be deployed to the Pacific in 1986.

(b) Ready Reserve Force

As noted earlier, we have begun a program to expand the Ready Reserve Force (RRF), a part of the National Defense Reserve Fleet. Current plans call for the force to grow to 116 ships (100 cargo ships and 16 tankers) by the early 1990s. This increase of 39 ships over previously planned levels was necessitated by a continuing decline in the capability of the civil fleet to carry military equipment.

This important force can be made available for strategic sealift operations on five to twenty days' notice, without disrupting routine commerce. In a major crisis, RRF ships would provide some of our earliest available strategic sealift. We also could use the ships for smaller contingencies not requiring augmentation from the U.S.-flag fleet.

(c) Civil Reserve Auxiliary Fleet Ships (CRAFTS)

It is expensive to maintain the large number of militarily useful merchant ships needed in the Ready Reserve Force to offset a declining U.S.-flag fleet. Moreover, while the RRF ensures an adequate number of readily available ships, the lay-up of ships does not stimulate growth of the U.S.-flag fleet, maintain desired shipyard work levels, or provide needed employment for merchant marine officers and seamen. This year, for the first time, we are exploring the possibility of supplementing our sealift capabilities through a civil reserve auxiliary fleet.

The CRAFTS program, similar in concept to the Air Force's CRAF program, will incorporate sealift enhancement features in privately owned commercial ships during their design and construction in U.S. yards. The Navy would pay, up front, for the installation of sealift enhancement features, for their maintenance over the following 15 years, as well as any operating penalty (fuel costs) due to increased dead weight. CRAFTS could reduce the number of ships needed for the RRF while stimulating U.S. shipbuilding, and providing increased employment for merchant mariners.

(d) Containership Utilization

In their operations to recapture the Falkland Islands, the British found breakbulk ships to be the most useful vessels for delivering cargo. These ships carry their own cranes and can accommodate the full range of military cargo. With the trend toward containerization in the maritime industry, however, breakbulk ships have become scarce. While the greater use of containerships has substantially increased shipping productivity, it has put into commercial service a class of ship with limited utility for military operations. Many items of military equipment are not suitable for containerization; moreover, most containerships are not self-supporting and require modern ports with extensive crane facilities to load or discharge cargo.

The Navy has developed two techniques for giving containerships a breakbulk capability. One uses container-sized platforms, called "flat racks," to build a tier of decks for carrying cargo. The racks fit into the standard container guides and can support even the heaviest military equipment. In essence, they function as portable decks that are loaded and unloaded with the cargo they carry. Alternatively, selected containerships can be fitted with large structures, called "sea sheds," that create a cargo hold accessible from the main deck. Installed in reinforced container guides, sea sheds are strong enough to carry the full range of military cargo and have a work-through floor allowing the cargo to be unloaded without removing the sheds themselves. Our goal is to buy enough flat racks and sea sheds to outfit approximately 50 containerships.

(e) Sealift Discharge

A deployment to SWA could well require unloading ships in austere or damaged ports, or in areas lacking port facilities. The Army and Navy are working together to improve their ability to deliver forces under these conditions. Key programs supporting that effort include the procurement of transportable barges for unloading ships unable to navigate in shallow water; mobile piers, portable facilities for unloading petroleum, oil, and lubricants (POL) from tankers; portable ramps for removing cargo from roll-on/roll-off ships; and 12 auxiliary crane ships (TACS) for unloading "non-self-sustaining" containerships.

	FY 1985 Actual Funding	FY 1986 Planned Funding	FY 1987 Proposed Funding	FY 1988 Proposed for Authorization
Ready Reserve Force				
Procurement				
Quantity[a]	6	13	—	—
$ Millions	31.0	228.4	27.8	50.4
Flat Racks and Sea Sheds				
Procurement				
Quantity	180	997	1,020	807
$ Millions	22.3	52.6	29.7	12.3
TACS				
Procurement				
Quantity	1	3	2	2
$ Milionss	30.5	82.5	61.1	59.9
Sealift Discharge				
Procurement				
$ Millions (Navy)	58.1	73.0	33.0	41.0
$ Millions (Army)	61.0	47.0	107.5	68.1

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[a] Quantity may vary depending on actual unit costs at time of purchase.

(4) Command, Control, and Communications (C^3) Support

Work continues on a number of improvements in the C^3 systems serving the airlift and sealift fleets. The high-frequency radios aboard long-range military transport aircraft are being upgraded, and commercial ships that would carry military cargo in a war are receiving more capable and secure communications equipment. In addition, automated transportation planning and C^3 systems, including the Joint Deployment System, are in development. These latter systems will contain master data files and computer models for use in formulating contingency plans; in a crisis, they would provide up-to-the-minute information to commanders making deployment decisions.

4. Conclusion

The proximity of the Soviets and their allies to several regions of critical importance to the United States and their ability to field large forces on short notice pose enormous challenges to our ability to mobilize and deploy our forces. We have recognized the serious shortfalls in our capability and have begun a series of programs to correct them.

Through WARMAPS, we have achieved a more realistic understanding of our mobilization manpower requirements and capabilities. Recent exercises have identified the problems we would face in an actual mobilization, and have led us to improve and strengthen our plans. In particular, improved management of our reserves and initiatives to take better advantage of the capabilities of our retirees, federal civilian employees, and contractors have greatly increased our ability to mobilize rapidly.

The procurement of additional C-5s and KC-10s and of the new C-17 aircraft, along with CRAF Enhancement and extensive prepositioning, will greatly increase the capability and flexibility of our airlift forces. Completion of the Maritime Prepositioning Ships program will enable us to deploy a Marine force very rapidly to distant theaters of conflict; completion of the fast sealift program will do the same for Army forces. The expansion of the Ready Reserve Force, coupled with continued purchases of equipment to unload ships in austere or damaged ports, will enhance our capability to deploy combat forces and materiel by sea.

The programs we have planned for the next five years will move us considerably closer to our goal of being able to mobilize our forces quickly and deploy them rapidly to distant theaters. While further improvements will be necessary, these programs will greatly enhance both the deterrent value and the warfighting strength of our forces.

D. COMMAND, CONTROL, COMMUNICATIONS, AND INTELLIGENCE (C^3I)

1. Introduction

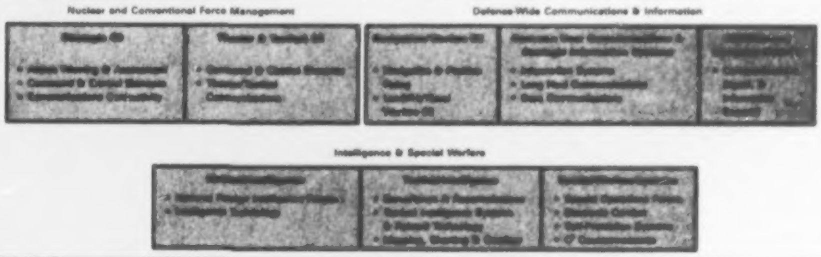
C^3I systems are the critical information and control links necessary to support command decisionmaking and manage our forces during peacetime and periods of crisis. These integrated support systems consist of sensor arrays, communications networks, information processing and display systems, and command facilities.

Our basic national strategy is one of deterrence of war through the defensive use of strategic, nonstrategic nuclear, and conventional military power. Since this commitment requires our military forces to react quickly if an enemy takes the first initiative, heavy reliance is placed on C^3I systems that are capable of rapid and effective force management. A primary goal of DoD is to provide survivable, secure, endurable, and interoperable C^3I systems to maximize the performance of our forces and weapons systems, and, should deterrence fail, to provide the means to control the escalation of conflict and to terminate hostilities rapidly on terms favorable to the United States.

The Congress directed that all C^3I management functions be centralized under an Assistant Secretary of Defense to promote a more efficient management mechanism for directing the evolution of C^3I systems from initial policy formulation through final acquisition. In order to support this initiative and emphasize a total C^3I/weapon systems approach to our development and acquisition activities, C^3I programs are grouped in accordance with the management structure shown in the following chart.

Chart III.D.1

Command, Control, Communications, and Intelligence Management Structure


Nuclear and Conventional Force Management
Defense-Wide Communications & Information
Intelligence & Special Warfare

2. Strategic C^3

Strategic C^3 allows the translation of employment plans into mission capabilities and is, therefore, an essential element of our deterrence strategy. (This topic is discussed in greater detail in Chapter III.B.4.) To be successful, our strategic C^3 programs must provide the means to link widely dispersed strategic units into an integrated, effective force. Strategic C^3 programs provide three fundamental capabilities: attack warning and attack assessment, command decisionmaking, and strategic communications connectivity.

In the attack warning/attack assessment area, we are procuring additional PAVE PAWS radars to be operational in calendar years 1986 and 1987. Also, upgrades to the Thule BMEWS radar are under way, and work is now ongoing to replace the antiquated detection and tracking radars with a new ultrahigh frequency (UHF) phased-array radar. These upgrades will significantly enhance the quality and detail of missile warning information available for decisionmaking in the event of a nuclear attack by intercontinental ballistic missiles (ICBMs) and submarine-launched ballistic missiles (SLBMs). Similar efforts are programmed for the Fylingdales BMEWS radar in England beginning in FY 1986.

In the atmospheric threat surveillance area, the existing Distant Early Warning (DEW) line is being totally replaced. This replacement, called the North Warning System, will result in a substantially improved capability to detect modern aircraft and cruise missiles across the entire North American boundary. The North Warning System, together with the new Over-the-Horizon Backscatter (OTH-B) radars planned for the east, west, and southern United States, will provide complete contiguous surveillance coverage of air-breathing threats and timely warning of bomber or cruise missile attacks on North America.

In the command decisionmaking area, we are continuing to upgrade the survivability and capability of those command centers that would direct U.S. strategic forces during all phases of operations, from low-level crises through nuclear conflict over an extended timeframe. A significant improvement in the survivability of these capabilities has been realized with the delivery of four E-4B National Emergency Airborne Command Posts (NEACP) to serve the National Command Authorities (NCA) during crisis or war.

Our strategic communications programs are structured to provide improved communications and assured connectivity between sensor sites, command locations, and nuclear capable forces. In both the strategic ground-based and the satellite communications (SATCOM) areas, we are continuing to make improvements in the quantity, quality, and cost-effectiveness of our programs, with particular attention being focused on increased capacity, survivability, and endurance. One example of our progress is the implementation of the second phase of the Ground Wave Emergency Network (GWEN). Another is the replacement of the EC-130 TACAMO aircraft with the E-6A. Its greater range, speed, and endurance will significantly enhance the TACAMO mission.

3. Theater and Tactical C^3

Theater and tactical C^3 systems are essential to military commanders for planning, directing, controlling, and operating their forces, including nuclear capable forces, in a hostile environment. Our main objectives in this mission area are to:

-- Provide flexible, reliable, secure, and enduring tactical C^3 systems;

-- Provide interoperable and connective force management assets;

-- Give our forces the capability of resisting and countering the electronic threat;

-- Provide improved automation for tactical C^2;

-- Integrate C^3 throughout weapons systems developments;

-- Emphasize secure, jam-resistant, and interoperable voice/data communications;

-- Provide improved interoperable identification systems; and

-- Deploy a precise worldwide, all weather, jam-resistant navigation capability.

Several of our theater and tactical C^3 systems have completed the development phase and are in production. Examples include: the majority of our TRI-TAC program equipment; Single Channel Ground and Airborne Radio Systems (SINCGARS); improved fleet telecommunications equipment; ground mobile forces satellite equipment; and the Position, Location, and Reporting System (PLRS).

DoD has long recognized the importance of interoperability among the four Services and its allies. In this regard, we have recently established the Joint Tactical Command, Control, and Communications Agency (JTC^{3}A) to develop technical standards and the long-range joint tactical C^3 architecture needed to ensure interoperability.

Another major milestone in promoting interoperability was achieved with the development of a NATO Identification System (NIS), the Mark XV Combat Identification System, to distinguish aircraft reliably as friend-or-foe. After years of debate, the United States and Germany have reached an agreement on the operating parameters to be used for the NIS; this agreement was subsequently endorsed by NATO. Work will proceed in FY 1986 to define, with other NATO nations, the detailed technical parameters for the system, leading toward a test flight of the system by the early 1990s.

Of particular note was the first successful flight test of the Joint Tactical Information Distribution System (JTIDS) terminal on an F-15 aircraft during 1985. This success clears the way for resilient interoperable data and voice jam-resistant communications that will serve our forces well into the next century.

To ensure reliable and secure beyond line of sight communications in a wartime environment, we must exploit every available technology. This includes satellite communications and other systems in the inherently long-haul frequency spectrum, including high frequency (HF). Systems in the lower frequency spectrum such as HF permit long-haul communications without the additional vulnerability of a relay system. In order to ensure reliable HF communications, we plan to award a full-scale engineering development contract for the High Frequency Antijam Program in the coming year.

The last NATO Airborne Warning and Control System (AWACS) E-3A was delivered in April 1985. This completed the delivery of 18 NATO E-3As in this historic cooperative $1.8 billion program. These aircraft are now operational in the European theater, manned and maintained by international crews. They are providing an unprecedented warning and control capability in Europe.

Our commercial technology has advanced at a remarkable pace over the last decade. We have recognized an opportunity to capitalize on this technology for our tactical forces. By applying nondevelopment items to military use, we can shorten the cost and acquisition time for many major procurements. An example of this approach is the multi-billion dollar Mobile Subscriber Equipment (MSE) program. This program will provide improved mobile communications to our tactical forces in less than one-third of the standard development time and at a significant cost-savings to the government.

4. Defense-Wide Communications and Information System

Defense-wide systems support both nuclear and conventional force management. Efforts to improve the capabilities of our defense-wide communications and information systems focus on navigation/warfare C^2, common-user communications, and strategic information systems.

a. Navigation/Warfare C^2

The Navstar/Global Positioning System (GPS) is a major effort to improve our navigational capabilities. It is a space-based system providing highly accurate position, velocity, and time information. The fixed price 28 satellite production line is now in full operation, and we have begun the acquisition of other sensors for deployment on GPS satellites that will accurately detect and locate nuclear detonations on a global basis. Deployment of the initial 18 satellite network scheduled for calendar year 1988 will provide a global, three-dimensional, navigation/position fixing and timing capability.

b. Common-User Communications and Strategic Information Systems

Common-user communications and strategic information systems include: the capabilities required for information processing, storage, retrieval, and display for strategic command and control processes; the Defense Communications System that provides global telecommunications service to DoD; and all DoD support and base communications programs.

The ADP element of the Worldwide Military Command and Control System (WWMCCS) supports the National Command Authorities and key military commanders. The WWMCCS Information System (WIS) is DoD's modernization program for both hardware and software. The WIS is being developed and fielded in "blocks" of capabilities. Block A provides the technical foundation for the entire WIS program. Developmental testing and evaluation along with integration testing will be completed on the initial WIS capabilities (Block A) in FY 1987. Our strategic modernization efforts also include upgrades to the NORAD-Cheyenne Mountain Complex ADP equipment needed to satisfy C^3I requirements unique to the attack warning/attack assessment function and to various types of operations in space.

The Defense Communications System (DCS) consists of both government and commercial facilities. We are pursuing the following major programs to improve the capabilities of the DCS:

(1) The Defense Switched Network (DSN)

The DSN is DoD's next generation, long-distance telephone service. Phase I of the DSN will be fully operational by FY 1987 and will provide telephone, data, and video services in portions of the Western Hemisphere. Efforts will begin to replace AUTOVON by exploiting the public switched network and commercially available technology. Overseas acquisition will be completed and a major portion of Phase I will be operational in Europe and the Pacific.

(2) Integrated AUTODIN System (IAS)

The IAS will replace the 20-year-old Automatic Digital Network (AUTODIN) system that has been DoD's primary means of transmitting and receiving formal message traffic. IAS consists of three components: the Defense Data Network (DDN), the Inter-Service/Agency Automated Message Processing Exchange (I-S/A AMPE), and the Blacker program. DDN replaces the analog transmission media of AUTODIN with a common user long-haul digital transmission media. I-S/A AMPE replaces the antiquated AUTODIN switching centers and user terminal equipment. The Blacker program provides end-to-end multilevel security protection. Each component begins fielding in 1989 with full system operational capability achieved in the mid-1990s.

(3) Secure Voice System (SVS)

The SVS will replace the Automatic Secure Voice Communications System (AUTOSEVOCOM), which currently provides DoD's primary secure voice capability. SVS consists of three components: the Secure Voice Improvement Program (SVIP), the Secure Conferencing Project (SCP), and the Red Switch Project (RSP). SVIP will provide new secure telephone units (STU-III) and interface devices. SCP will provide a worldwide secure voice and graphics conferencing capability. The RSP provides automatic secure telephone switching and tactical interfacing for the NMCC, ANMCC, and CINC command centers. Each component is in a different development and acquisition stage. Full system operational capability will be achieved in the mid-1990s.

c. Communications and Computer Security

Communications Security (COMSEC) is directed at fulfilling two basic objectives: the development of reliable and economical cryptographic systems for meeting the needs of the military departments and agencies of the federal government, and the development of improved cryptographic principles, techniques, and technologies required to maintain and enhance the secure receipt of U.S. communications in the face of increasingly sophisticated threats. We are continuing to implement protective measures to deny unauthorized persons access to national security information from U.S. telecommunications. As a part of this effort, we will begin the acquisition of small, relatively inexpensive secure telephones for installation throughout the federal government. Other initiatives focus on data and network security, nuclear release verification, the space program, and COMSEC technology development.

The DoD computer security program is designed to improve the security posture of defense computer systems. DoD has played a lead role in the National Telecommunications Information System Security Committee (NTISSC) established by the President. This group is responsible for policy and programs for the protection of national security information across all federal departments and agencies. In addition, work on a guideline entitled "DoD Trusted Computer System Evaluation Criteria" was recently completed. Our plan is to use this guide as a standard to assist in evaluating the effectiveness of computer safeguards for defense applications. Also, DoD is developing guidelines that will make it easier to determine and specify the level of security that a system needs when generating requests for procurements or acquisitions. Moreover, we are setting up an extensive vulnerability reporting program aimed at correcting weaknesses in DoD computer systems. Finally, policy directives and instructions are being updated and streamlined to reflect the emphasis on computer security.

5. Intelligence

The need for expanded intelligence support has become increasingly important as the worldwide threat to U.S. interests widens. The DoD intelligence structure is designed to collect and process operationally significant military information and disseminate the results to national, departmental, and tactical users, allowing decisionmakers to respond to military, diplomatic, and economic developments. Intelligence also permits weapons systems designers and developers, along with military strategists, to improve warfighting equipment and to update warfighting plans and concepts.

Our intelligence activities are accounted for in two separate, but related programs; the National Foreign Intelligence Program (NFIP) and Tactical Intelligence and Related Activities (TIARA). The Director of Central Intelligence, under Presidential direction, provides guidance and manages the overall NFIP. TIARA programs, under OSD oversight, are developed and managed by the Services and agencies in response to operational commanders' intelligence requirements. To strengthen interaction, an NFIP/TIARA Review Board was established this year to review interoperability, NFIP/TIARA technology transfer, and to ensure that there is no unnecessary duplication.

The overall goal for the intelligence program is to support user requirements at all levels. In this regard, we must ensure that the intelligence support structure essential for military operations is compatible with theater and Service C^3I architectures, interoperable with Service systems, supported with assured wartime communications, and as survivable as the commands and forces supported.

To accomplish this we have implemented a multilevel approach. With the unified and specified commands, we are developing integrated intelligence architectures under the Theater Intelligence Architecture Program (TIAP). Specific high-priority initiatives are also being pursued, such as imagery integration under the Imagery Acquisition and Management Plan (IAMP) and communications support under the Intelligence Communications Architecture (INCA) program.

Recognizing that future conflicts may well entail low-intensity warfare in less developed regions, we are developing capabilities to support governments seeking U.S. assistance. In Central America, we have implemented an intelligence capability that has significantly increased the effectiveness of friendly forces. For example, Remotely Piloted Vehicles (RPVs) were deployed in a relatively short time, allowing much greater surveillance capability than previously possible. Efforts such as these enable friendly nations to help themselves against externally supported aggression, while permitting the United States to maintain a low profile.

In like manner, we are expanding our intelligence capabilities to respond to the ever widening range of threats. We are developing capabilities in support of coalition warfare to share tactical intelligence with our NATO allies under the Battlefield Information Collection and Exploitation Systems (BICES) concept. We are also pursuing greater interoperability for our own forces. As an example, the Army has developed the Technical Control and Analysis Center (TCAC) to process signals intelligence (SIGINT) information for tactical units deployed in the field. The Marine Corps has used the system on a trial basis and is now developing a program to procure these systems so as to be able to support their own needs, at the same time ensuring an effective degree of interoperability. Similarly, we have improved the capabilities of the U.S. Central Command with the FY 1985 fielding of an improved intelligence processing/communications interface system. Also in FY 1985, we began fielding ASARS II (an advanced synthetic aperture radar system for the TR-1 aircraft) in the European theater.

In the coming years, we will develop and field advanced collection platforms and sensors. RPVs, with their many-faceted capabilities, will begin to enter the inventory. Sensor packages will give the field commander the ability to look deeper, with greater accuracy, and in a more timely manner. Near-real-time intelligence, through the automated fusion of large amounts of data, will become a reality. Comparable enhancements in intelligence training systems and investment in our foreign language programs are also being stressed. Accordingly, our ability to support the needs of users of intelligence, from national leaders to military field commanders, will significantly expand over the next several years as programs currently under development enter our military inventory.

Responsibility for the independent monitoring, review, and inspection of DoD intelligence and counterintelligence activities to ensure their propriety and legality is assigned to the Assistant to the Secretary of Defense for Intelligence Oversight (ATSD(IO)). The ATSD(IO) not only conducts worldwide inspections of DoD intelligence elements, but also oversees the inspections of intelligence units by the Inspectors General of the Services and defense agencies. During the past year, the ATSD(IO) conducted 141 inspections of DoD intelligence elements and reviewed the results of 52 additional inspections by the IGs of NSA, DIA, and Service intelligence organizations. The ATSD(IO) also evaluated inquiries into allegations of questionable activities to assure that the investigations were rigorously and thoroughly accomplished, and that appropriate corrective measures were implemented. Intelligence components of the military departments and defense agencies report to the ATSD(IO) the results of inquiries into allegations of illegality or impropriety, as well as activities undertaken to assure compliance with Executive Order 12333, "United States Intelligence Activities," and DoD policies.

6. Special Warfare Systems

Special Warfare Systems (SWS) deal with special operations, counterterrorism, tactical deception, and electronic combat. C^3I special operations efforts include the coordination and oversight of research and development (R&D) efforts for special operations and counterterrorism. We are applying new technology to specialized equipment for special operations and initiating programs to accommodate the longer-term R&D needs of special operations.

Electronic combat (EC) involves military action using electromagnetic energy to determine, exploit, reduce, or prevent hostile use of the electromagnetic spectrum while retaining friendly uninterrupted use of this resource. The recently published DoD Electronic Warfare Plan is an important first step toward achieving an improved, integrated EC acquisition and investment strategy that provides the framework for future EC development.

Two major programs for threat warning and self-protection are the Airborne Self-Protection Jammer (ASPJ) for our frontline fighter aircraft, such as the F/A-18 and F-16, and the Integrated Electronic Warfare System (INEWS). INEWS will provide a generic, next generation EC subsystem that will be integrated with other avionics subsystems to provide crew warning and countermeasures response for combat aircraft operational in the post-1990 time-frame.

Standoff and escort jamming complements our self-protection systems by degrading enemy early warning and ground control intercept sensors. The two main support aircraft used for this purpose are the EA-6B and the EF-111.

C^3 Countermeasures (C^3CM) is a strategy that integrates four fundamental approaches: destruction, disruption, deception, and denial of information to hostile C^3 and intelligence systems, while protecting friendly C^3 systems. We have completed development and commenced deployment of the COMPASS CALL communications jamming aircraft and entered full-scale engineering development of the AN/ALQ-149 communications jammer for the EA-6B ADVCAP aircraft.

7. Conclusion

Making our strategy of deterrence more effective requires a continued commitment to eliminating vulnerabilities in our C^3I systems. In view of the demands placed on C^3I by the multilayered aspects of deterrence, it is essential that the survivability and endurance of our C^3I systems be enhanced.

During the past year, we have made substantial progress in reducing weaknesses in our C^3I systems and, in turn, strengthening our C^3I capabilities. Being less visible than other aspects of our modernization effort, it could be tempting, as was sometimes done in the past, to overlook shortcomings in the area of C^3I. However, as evidenced by the emphasis the President's strategic modernization program places on C^3I and recent allocation of funds to improve the C^3I program, we are firmly dedicated to providing the enhanced C^3I capabilities necessary for effective and enduring force management under all conditions. The achievement of these capabilities not only requires the continued investment of resources, but also the dedicated commitment to maintain existing and promote future management initiatives directed at fielding an affordable mix of survivable C^3I systems able to meet an evolving global threat.

E. PREPARING TOMORROW'S FORCES — RESEARCH AND ADVANCED DEVELOPMENT

1. Introduction

A credible and stable deterrence strategy presupposes continued research and development of systems designed to preclude any hostile nation from acquiring a destabilizing military advantage. It is increasingly evident that the quality and quantity of Soviet-bloc equipment cannot be offset solely by the plans and programs enumerated elsewhere in this posture statement. An active research and development (R&D) program is essential for tomorrow's readiness. The R&D efforts of our defense establishment contribute to our military capabilities in that they ensure that our deployed forces are equipped with effective, reliable equipment that can be produced in needed quantities at an affordable cost.

R&D expenditures are of particular importance because they represent investment in future military capability -- capability that we must plan and invest for now to ensure our fighting forces are deployed with equipment that retains their confidence and helps ensure their success.

Table III.E.1
Relative U.S./USSR Standing in the Twenty Most Important Basic Technology Areas

Basic Technologies	U.S. Superior	U.S./USSR Equal	USSR Superior
1. Aerodynamics/Fluid Dynamics		X	
2. Computers and Software	← X		
3. Conventional Warheads (Including all Chemical Explosives)		X	
4. Directed Energy (Laser)		X	
5. Electro-Optical Sensor (Including Infrared)	X		
6. Guidance and Navigation	X		
7. Life Sciences (Human Factors/Biotechnology)	X		
8. Materials (Lightweight, High Strength, High Temperature)	X →		
9. Micro-Electronic Materials and Integrated Circuit Manufacturing	X		
10. Nuclear Warheads		X	
11. Optics		X	
12. Power Sources (Mobile) (Includes Energy Storage)		X	
13. Production/Manufacturing (Includes Automated Control)	X		
14. Propulsion (Aerospace and Ground Vehicles)	X →		
15. Radar Sensor	X →		
16. Robotics and Machine Intelligence	X		
17. Signal Processing	X		
18. Signature Reduction	X		
19. Submarine Detection	X →		
20. Telecommunications (Includes Fiber Optics)	X		

NOTES:

- The list is limited to 20 technologies, which were selected with the objective of providing a valid base for comparing overall U.S. and USSR basic technology. The list is in alphabetical order. These technologies are "on the shelf" and available for application. (The technologies are not intended to compare technology level in currently DEPLOYED military systems.)
- The technologies selected have the potential for significantly CHANGING the military capability in the next 10 to 20 years. The technologies are not static; they are improving or have the potential for significant improvements; new technologies may appear on future lists.
- The arrows denote that the relative technology level is CHANGING significantly in the direction indicated.
- The judgements represent overall consensus for each basic technology area. The USSR may be superior in some of the subtechnologies making up each basic technology. The average assessment can incorporate a significant variance when individual components of a technology are considered.

Soviet investment in military R&D has increased steadily in real terms for the past 20 years. Each year for the past decade the estimated dollar equivalent cost of their military R&D program has exceeded that of the United States. The Soviets are currently estimated to spend significantly more than what the United States spends for military R&D. In addition, the Soviets deploy approximately twice as many new and upgraded systems every ten years as does the United States. It should also be noted that this relentless Soviet buildup began from a very high base. We do not intend to "catch up" to the Soviets on a weapon for weapon basis. To do so would not only be inordinately expensive, but it would also be impractical. We do intend, however, to maintain the technological superiority that has served our strategy of deterrence so well.

Table III.E.1 illustrates that the United States continues to maintain a lead in 14 of the 20 most important basic technologies areas, despite the continuing massive Soviet investment in military research and development.

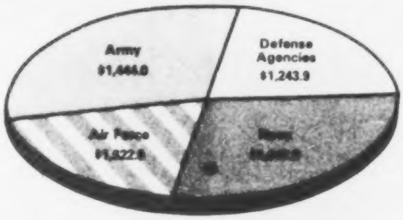
Other chapters of this report address R&D efforts in particular mission and Service-specific functional areas. This chapter focuses on those broad, cross-Service efforts in science and technology (S&T), advanced research projects, and nuclear weapons development.

2. Science and Technology Program

The Science and Technology (S&T) program forms the foundation for the research, development, test, and evaluation (RDT&E) program that, in turn, provides the military systems and equipment required by our future forces. Research, exploratory development, and advanced technology development are carried out by the nation's universities, industrial firms, and DoD laboratories. These institutions are engaged in the search for fundamental scientific knowledge and the translation of that knowledge into useful military products.

There is considerable uncertainty as to the nature of future conflict, but it is clear that the modernization process must provide for capable, reliable, and affordable materiel that can be operated effectively in a variety of military contingencies and battlefields. DoD

Chart III.E.1
FY 1987 Science and Technology Program Request*



* Does Not Include Strategic Defense Initiative

Total Request (B) $5.358

has recognized the importance of preparing for the future by undertaking S&T programs over a wide range of technologies important to the defense mission. It is through this process that we can assure military commanders of the capability they will need to meet the challenges of the future.

Our S&T programs are managed by the Services and the defense agencies (Chart III.E.1). The following paragraphs highlight some important Service endeavors. Defense agency programs are discussed in other sections of this report.

a. Integrated Circuits

We are continuing to make significant progress in developing integrated circuits, a key component of most military systems. Excellent progress has been made on the Very High-Speed Integrated Circuits (VHSIC) program. Most of the planned 1.25 micrometer VHSIC chips are fully functional with significant numbers available for weapons systems demonstrations. In addition, "brassboard" signal processors provide capabilities at the leading edge of technology. Development of the next generation 0.5 micrometer VHSIC chips is progressing satisfactorily with initial samples available for DoD testing. The introduction of these devices into DoD systems and equipment will significantly enhance the capabilities of our forces.

In addition to the VHSIC program, a new integrated circuit initiative is being undertaken. Microwave/millimeter monolithic integrated circuits using gallium arsenide materials offer great potential for increasing the capabilities of the "sensor electronics" of weapons systems and equipment. The program will focus on integrating analog functions into monolithic circuits and will provide significant gains in affordability, capability, and reliability over a wide range of frequencies used by the military.

b. Aircraft Propulsion Technology

Aircraft propulsion technology programs emphasize efforts that will increase significantly aircraft capabilities in both the mid- and long-term. The Air Force/Navy Joint Technology Demonstrator Engine program will provide the basis for further improvements in both new and growth engines. A recent Air Force initiative in expendable engine technology will lead to significant increases in cruise missile capabilities. The Army's Modern Technology Demonstrator Engine program will be completed on schedule this year. It seeks to develop an engine with 20 to 25 percent reduction in fuel consumption and reduced support costs compared to existing 5,000 horsepower class engines. Finally, our exploratory development efforts have been oriented to achieve greater than a factor two increase in high-performance turbine engine capabilities by the turn of the century.

c. Aircraft Technology

The Air Force has completed initial flight tests of a modified F-16 aircraft in its Advanced Fighter Technology Integration program. This aircraft features a unique digital flight control system that when used in conjunction with special control surfaces can produce variable response characteristics. The aircraft response characteristics can be optimized for the specific mission task of the aircraft, e.g., air-to-air combat, air-to-surface attack, etc. These tests have demonstrated a capability for a two-to-one increase in air combat effectiveness for future Air Force fighters such as the Advanced Tactical Fighter (ATF).

d. Materials and Structures

The FY 1987 Advanced Materials and Structures Technology program emphasizes the survivability of aircraft and missile structures against potential directed energy weapons. While the principal effort will address the laser threat, the program will also include protection concepts for military equipment subjected to high power microwaves and particle beams. These efforts will be directed toward evolving innovative materials and hardening techniques utilizing unique combinations and structural arrangements of metal-matrix and carbon-carbon composite materials.

e. Rocket Propulsion Technology

The United States continues to maintain a world leadership position in rocket propulsion technologies for space and missile applications. Smokeless rocket motors for tactical missiles provide a significant military advantage and are in great demand by our allies. Another rapidly maturing technology is the "pulse motor" concept in which a solid propellant rocket motor can be turned on and off several times during flight. Missiles employing these motors may have two times the range available from conventional rocket motors. In addition, safety issues continue to be emphasized in rocket propulsion programs in an effort to develop motors that are insensitive to shock or bullet impact, and can survive aircraft fuel fires.

f. Computers and Software

The defense software initiative is currently exploring three areas to improve our ability to develop and maintain reliable and cost-effective software. We have adopted a powerful standard programming language, Ada, that is projected for use in over 100 military systems to include NATO systems and certain parts of NASA's space station program. The Software Engineering Institute has been established to accelerate the transition of new software technologies into system use. The third element of our software initiative is the Software Technology for Adaptable, Reliable Systems (STARS) program. This program will improve our ability to provide software to meet mission-critical system requirements. Progress has been made in STARS planning, and a framework is in place for exploring software reuse, improved productivity of the software work force, and an automated software engineering environment. Planning is also under way for determining the requirements for the next generation of military computers, which should enter service in the early 1990s.

g. Sensors and Signal Processing Technology

Significant advances are being made in the development of infrared, micro/millimeter wave and acoustic sensors for target detection, surveillance, classification, identification, and tracking. With the advent of sensitive, high-density, infrared detector focal plane arrays and efficient phased-array antennas with compact transmit/receive modules, infrared and radar sensors can conduct surveillance and tracking missions over large areas with a very high resolution. Using advanced high capacity, signal processing computers with optical, temporal, and spectral discrimination algorithms, false alarms and ground and sea clutter can be eliminated. In addition, the use of multisensor fusion techniques where radar and sensor and/or infrared sensor signals are correlated, precise target classification and identification is possible under difficult environmental and battle conditions. A coordinated program is being pursued by the Services to expand the military application of these advanced sensor and signal processing developments.

h. Medical and Life Sciences

The Medical and Life Sciences program contributes directly to unit readiness by keeping our personnel on the job at a high performance level. This program entails research ranging from vaccine development for diseases rarely found in the United States, through investigation of ways to protect personnel from excessive heat or cold, to developing techniques and equipment to prevent troops from suffering from the deleterious environments in which they may be required to live and fight. This includes environments such as high altitude, high acceleration forces, increased diving pressures, noise from artillery or other weapons, etc. The program seeks to maximize human operational efficiency in combat environments and is particularly important when you consider that manpower and manpower-related costs approach 50 percent of the DoD budget.

i. Chemical Defense

The Chemical Defense Technology program has continued to expand and achieve substantial progress toward meeting the needs of our combat forces. Cooperative programs with universities, industry, and our allies are providing new detection and warning devices with improved sensitivities and portability. Advances in biotechnology have generated breakthroughs in toxin detection mechanisms, prophylaxis, and therapy treatment. Developments in decontamination and collective protection systems are enhancing readiness by improving the ability to continue operations in a chemically contaminated battlefield. In view of the continuing chemical and biological warfare threat to our personnel, this program receives high priority in the technology program.

j. Laser Technology

Steady progress has been made in developing laser technology. We have been successful in developing and operating the most powerful and most capable experimental high energy laser facility in the free world. This facility, located at the White Sands Missile Range in New Mexico, enables us to conduct tests that are expanding our understanding of the military capabilities and limitations of lasers in both tactical and strategic roles. The high power laser program has resulted in many accomplishments, and we are just beginning to realize the potential of this relatively new area of science. Our goal is to use this technology to improve the capabilities of our forces and simultaneously to ensure that they are protected against this technology should it be used by an adversary.

k. Basic Research

The basic research program develops fundamental information that can be used to improve DoD's long-range technology posture. For example, the University of Wisconsin, under Air Force sponsorship, has made excellent progress in developing organosilicon compounds making possible the use of silicon carbide and silicon nitride ceramics to manufacture turbine blades, radar domes, and other compounds with increased fracture resistance. In Navy research, the parameters of acoustic signals used by humans in classifying sounds were determined. This has assisted the Navy in eliminating signals radiating from ships that might be used to confirm detection and classification. We plan to continue a strong and viable basic research program to enhance our technological lead.

3. The Defense Advanced Research Projects Agency

The Defense Advanced Research Projects Agency's (DARPA) goals are to pursue those highly imaginative and innovative research ideas and concepts offering significant military utility, and to marshal advanced research through demonstration of its feasibility for military applications. DARPA programs focus on technology development and proof-of-concept demonstrations of revolutionary approaches and include scientific investigations into advanced basic technologies for the future.

DARPA's research programs cover a broad spectrum of technologies, several of which are dicussed below:

a. Strategic Computing

The Strategic Computing program is developing a revolutionary machine intelligence technology base for application by the end of the decade. This new technology base will enable the development of systems that are characterized as intelligent when compared to the mechanical behavior of conventional computing systems. This effort is supported by research into advanced generic artificial intelligence (AI), multiprocessor system architectures, and optical- and microelectronics. The generic AI projects will produce new generation technology for expert systems, natural language, speech, and vision. The multiprocessor system architecture projects, using advanced Very Large Scale Integration (VLSI) technology, will produce systems that can be configured to provide a wide range of performance more than 1,000 times faster than existing computers. Demonstration of this technology will include the development of an autonomous eight wheel land vehicle using imagery from a television camera to determine its proper path; a pilot associate program that will explore the use of artificial intelligence to enhance the combat capabilities of a flight crew -- especially for a single-place fighter aircraft, and battle management projects using artificial intelligence in planning combat actions.

b. Hypersonics Technology Program

The FY 1987 hypersonics technology program continues a three year effort initiated last year that focuses upon the proof-of-concept demonstration of an advanced air-breathing propulsion system. Also included are programs examining advanced materials, structural cooling concepts, lightweight tank concepts, and engine and airframe aerodynamics integration concepts that could usher in a new generation of air-breathing hypersonic transatmospheric vehicles by the turn of the century. It is envisioned that such vehicles would take off from a runway and cruise as an airplane in the upper atmosphere at speeds in excess of Mach 10. These technologies appear to offer the potential of substantially reducing the cost per pound delivered to orbit for future space launch systems.

c. Armor/Antiarmor

A broad research and demonstration effort to begin in 1986 will identify fundamental mechanisms and phenomenology of advanced armor and develop mathematical models and measuring techniques to characterize materials at high strain rates. It is anticipated that developments will lead to significant advances in armor defeat mechanisms including chemical and kinetic energy hypervelocity munitions. New concepts for active and passive armor will evaluate lightweight materials in addition to chemical and electrical hybrid systems.

Armor defeat initiatives build on recent advances in the DARPA millimeter wave and infrared sensor programs and the hypervelocity electromagnetic gun program. This program will demonstrate a new family of low-cost terminal homing munitions that are compatible with conventional and hypervelocity electromagnetic launch mechanisms.

4. Nuclear Weapons Program

a. Modernization Program

DoD and DoE share statutory responsibilities under the provisions of the Atomic Energy Act of 1954 for managing the U.S. nuclear weapons program. The goal of this program is to enhance nuclear deterrence through a modernization program improving the military effectiveness, safety, security, survivability, and endurance of our nuclear weapons in all environments. In the near- and mid-term, we will continue the production and development of previously authorized weapons that modernize our strategic forces and emphasize incorporation of modern safety and command/control technology. A major focus in the future will be to modernize our tactical nuclear weapons stockpile.

Considerable progress has been made in improving the security and survivability of nuclear weapons worldwide. Survivability for nuclear weapons systems has been made a matter of DoD policy and should provide a firm basis for Service programs. Our NATO allies contribute substantial effort and resources toward developing a comprehensive posture for future storage and transport of nuclear weapons in Europe. Weapons protection matters have been given higher priority within NATO during the past year. Every effort is being made to expand cooperative programs with our NATO allies.

b. Program Management and Cost Control

In response to recommendations of the President's Blue Ribbon Task Group on Nuclear Weapons Program Management, we are working closely with DoE to emphasize fiscal discipline within and between federal departments. For example, we have proposed new arrangements for joint DoD/DoE senior level management reviews of nuclear weapons programs and budgets, with new opportunity for tradeoffs between departments related to nuclear weapons and other defense programs. Increased cost consciousness is being emphasized during the development of new nuclear systems through formal interdepartmental agreements on cost baselines and more thorough management reviews of the cost characteristics of each system.

Although fiscal discipline is being emphasized across-the-board, both DoD and DoE are also exercising great care to assure that this does not reduce the high standards necessary for safety and security or cause an unintended reduction in the quality of our nuclear research capabilities.

While much progress has been made, we must continue to strive to meet our objective of fielding adequate quantities of effective systems. Achieving our goals depends on continued congressional support. We intend to work closely with DoE and the appropriate congressional committees and their staffs to explain and justify our nuclear modernization program.

c. Defense Nuclear Agency (DNA) Programs

Defense Nuclear Agency (DNA) programs examine the technical aspects of nuclear weapons effects and system vulnerabilities, develop technology to enhance the survivability and security of U.S. forces, and provide timely information allowing the intelligence community to predict destruction thresholds of enemy systems. DNA programs include underground nuclear and aboveground high explosive testing, radiation and electromagnetic pulse (EMP) simulator testing, development of sophisticated computer models, and exoatmospheric experiments. DNA is also responsible for technical research and analyses of nuclear related problems to provide DoD, the Services, and the CINCs greater understanding of nuclear force employment, structure, size, and basing. In addition, DNA is DoD's lead organization in exploring the "nuclear winter" phenomenon.

In the next year we expect major advances from DNA's research on radiation hardened large-scale memories and very high-speed integrated circuits, and development of innovative methods of hardening against and testing to advanced electromagnetic pulse environments. In addition, DNA will pursue theoretical and experimental techniques to evaluate the survivability of state-of-the-art super-hardened strategic structures and road-mobile launchers. In 1985, DNA will complete construction of the underground nuclear test MISSION CYBER in support of the Navy's Trident II missile.

F. COALITION STRATEGY — THE STRENGTH OF ALLIANCE

1. Coalition Strategy

Our experience in two world wars and many lesser conflicts reinforces our belief that a system of defensive alliances and cooperation is the best way to deter potential opponents and the best way to share in the task of defending freedom. This coalition strategy is designed to maintain regional security by demonstrating to potential aggressors that they would face a determined and united opposition. Toward that end, U.S. policy seeks to strengthen our allies' and friends' efforts to preserve their independence of action in the face of increasing threats from the Soviet Union and its surrogates around the world.

Our commitment to the security of our allies and friends is a commitment to our own security as well. This commitment will last as long as the threat continues and as long as we possess the determination and will to preserve our shared values. Today, alliances are not temporary efforts to deal with specific short-term threats. The free world must act together to preserve our institutions and values from the long-term threat that the Soviet Union poses to our democratic way of life.

Our traditional alliances require continued attention and resources to counter dramatic increases in Soviet capabilities and efforts to divide the free world. Our leadership and consensus building in these alliances are particularly challenging diplomatic tasks as we work to achieve balance among the diverging and often conflicting interests of our alliance partners. Nonetheless, the long-term maintenance of these alliances is vital to our mutual interests, and we must remain resolute in our determination to overcome occasional disagreements, even those that become subject to intense public attention, thereby diverting our attention from our shared objective of deterring the Soviet threat. Our program to rebuild America's defenses and meet the Soviet challenge has breathed new life into our system of alliances and regional friendships. As a result, the years since 1981 have been our most peaceful period in three decades. Deterrence is working in Europe, in Asia, and in our own hemisphere.

Nonetheless, the threat of Soviet expansion is real, as Soviet operations in Afghanistan, Vietnam, and Angola have made clear. Cuban and Nicaraguan sponsored insurgencies threaten the stability of Central America. Libyan adventurism threatens the North African region, and the Iran-Iraq war could readily expand to engulf friendly nations in Southwest Asia. Moreover, while our adversaries are often deterred from direct attack, we have been required to devote increasing attention to the threat posed by low-intensity conflict, including terrorism and insurgency. As long as we face these challenges, we will find that our efforts not only bring peace to troubled areas but also strengthen our coalition for peace and freedom for the long-term.

2. Security Assistance and International Armaments Cooperation

In his State of the Union address on February 6, 1985, President Reagan placed security assistance in context:

Without resources, diplomacy cannot succeed; our security assistance programs help friendly governments defend themselves, and give them confidence to work for peace. The Congress should understand that dollar for dollar security assistance contributes as much to global security as our own defense budget.

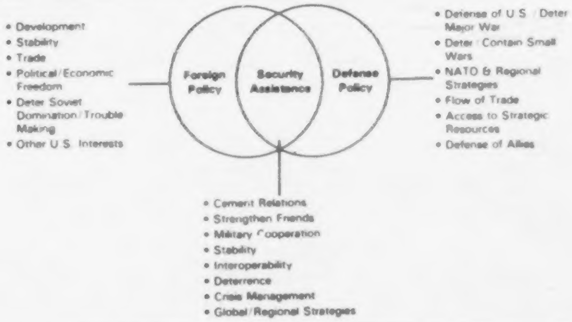
Security assistance strengthens formal alliances and contributes to stability in regions where formal alliances are not possible. U.S. security assistance programs in concert with other foreign policy tools have achieved some remarkable results, most notably preserving peace in the Middle East, improving the security situation in Central America, preventing the Iran-Iraq war from spreading, containing Libyan adventurism, securing Thailand against challenges along its eastern border, maintaining the security of the Republic of South Korea (ROK), and strengthening the posture of our friends and allies in Europe, Asia, Africa, and Latin America.

Our alliance system is the most successful example of coalition strategy and has served as a model for our worldwide efforts to preserve peace. Most of the world, however, resists formal alliances. Thus, U.S. strategy for regional security must be pursued through a series of interlocking bilateral security assistance relationships. Good examples of this approach to collective security are our policies toward Southwest Asia (SWA) and Central America.

Security assistance acts both as an instrument of foreign policy and defense policy. The dynamics of this relationship are illustrated in Chart III.F.1. Today, our security assistance programs are running smoothly and are strengthening U.S. relations with recipient nations. Actions taken to reduce the federal budget deficit, however, could threaten the ability of our security assistance programs to meet our requirements and those of our friends and allies. Our challenge is to secure sufficient funding in this difficult fiscal environment to meet our national security requirements. Failure to meet this challenge could be costly. Should a crisis develop in any of a number of volatile areas, for example, the economic burden for the United States would be much greater should U.S. forces be deployed to perform a mission that an adequate security assistance program could have prepared local forces to do.

Chart III.F.1

Role of Security Assistance in Achieving Objectives


• Development
• Stability
• Trade
• Political/Economic Freedom
• Deter Soviet Domination/Trouble Making
• Other U.S. Interests
Foreign Policy
Security Assistance
Defense Policy
• Defense of U.S./Deter Major War
• Deter/Contain Small Wars
• NATO & Regional Strategies
• Flow of Trade
• Access to Strategic Resources
• Defense of Allies
• Cement Relations
• Strengthen Friends
• Military Cooperation
• Stability
• Interoperability
• Deterrence
• Crisis Management
• Global/Regional Strategies

We develop our programs from a hierarchy of strategic considerations. Starting with global U.S. strategic objectives, we derive strategic objectives appropriate to each region in which we have major interests. These regional objectives are weighed together with the country-specific threats and military requirements in order to plan, with the country, the details of each country's program.

Since 1981, the Administration has initiated or greatly expanded programs in a number of countries. Of special note are the new programs for Pakistan, increases in funding for Israel, Egypt, and Turkey, and a vigorous response in Central America.

We have demonstrated that we can respond quickly -- with no significant degradation of our own readiness or painful diversions -- to assist countries facing crisis. We have made such responses in Central America, Grenada, Chad, Lebanon, and Thailand and also reacted quickly to urgent requests from Saudi Arabia and Morocco.

Regionally, security assistance contributes to our foreign policy and defense objectives in a number of ways. Our programs continue to contribute greatly to ongoing diplomatic efforts to resolve conflicts in key areas, such as the Middle East. U.S. security assistance programs also play a crucial role in bilateral and coalition efforts to contain or deter conflicts in areas of high concern to the United States such as Korea, Pakistan, Morocco, and Somalia.

In addition, the promise of security assistance funding has greatly facilitated the conclusion of critical base rights renegotiations in strategically vital countries. Security assistance has also helped secure access to air and port facilities in or en route to Southwest Asia, thereby enhancing our force projection capability.

Finally, our security assistance programs have helped us cement closer relations and expand our strategic dialogues with such states as Tunisia, Egypt, Morocco, Saudi Arabia, Israel, Pakistan, Korea, Thailand, Indonesia, Jordan, and Turkey. In addition, our dialogues with the Gulf Cooperative Council (GCC) states are slowly expanding. Our current emphasis on even closer planning with many of our key security partners ensures that our programs will continue to be responsive to the needs of our friends and allies as we pursue our own national goals.

Today, we face the challenge of securing adequate funding to meet regional program requirements in a fiscally constrained environment. We must meet this challenge, because the costs of disengagement are far too great.

Because of uncertainties in this year's budget process, dollar figures for security assistance programs are unavailable. These programs include:

-- Foreign Military Sales Credit Financing (FMSCR), which provides direct credits to countries, either at prevailing interest rates or a concessional rate, to allow the purchase of equipment or services from the U.S. government or directly from U.S. contractors;

-- Military Assistance Program (MAP), which provides, on a grant basis, defense articles and services to eligible governments; and

-- International Military Education and Training (IMET), which allows DoD to provide training and training support to foreign military personnel as grant assistance.

a. Special Security Assistance Programs

There are two special DoD-administered programs that are a part of our security assistance program: the Special Defense Acquisition Fund (SDAF) and Support for Non-U.S. Origin Equipment.

(1) Special Defense Acquisition Fund (SDAF)

SDAF procures U.S. military equipment and services in order to increase our responsiveness to the security assistance requirements of friendly nations while minimizing degradation of U.S. readiness caused by diversions from production or withdrawal from our stocks. Through FY 1986, the Congress capitalized SDAF at a level of $1 billion from certain foreign military sales (FMS) receipts (i.e., receipts from nonrecurring cost charges) that are deposited in the SDAF account.

SDAF has been in operation since late FY 1982 and has obligated $719 million to date. We allocated 84 percent of the first three years' (FY 1982 to FY 1984) SDAF acquisitions against actual and prospective foreign military sales, and we are now in the process of allocating our FY 1985 acquisitions in a similar fashion. SDAF sales so far have met urgent needs in 25 countries, have expedited payback to the Services for diverted items, and have smoothed or extended U.S. production lines, thereby contributing to reduced costs and increased readiness.

Additional capitalization will be needed to allow DoD to continue to increase the availability, variety, and quantities of those selected critical defense items that are in high demand, short supply, and often have long procurement lead-times. We are requesting an additional $100 million in capitalization for FY 1987.

(2) Support for Non-U.S. Equipment

DoD has implemented a new program to assist a few selected friends and allies with security assistance support of non-U.S. origin weapons systems. This service is usually accomplished by those U.S. contractors that are capable of providing parts replacement, repair or upgrade, and training for a variety of non-U.S. origin weapons systems. The program is intended to help countries maintain their defense postures by allowing continued use of non-U.S. equipment in their inventories. The program can also facilitate a shift from total dependence on one military supplier nation, or provide an interim, low-cost solution for countries that are unable to purchase new equipment immediately and are faced with an aging, and sometimes diverse, inventory of foreign military hardware.

b. International Armaments Cooperation

The overall objective of our international cooperation and technology transfer program is to develop, field, and support -- through equitable burdensharing -- the most effective and interoperable conventional military equipment for our forces and those of our allies and friends. This requires international cooperation and the exchange of military technologies and goods, when in our national interest to do so, and the denial of militarily critical technologies and goods to our potential adversaries. How this program is implemented is discussed below in the context of regional security needs.

3. Humanitarian Assistance

Humanitarian assistance and civic action abroad serve both U.S. moral principles and our foreign policy objectives. Accordingly, I have sought to expand the military's capability to provide timely humanitarian assistance where needed.

I have increased DoD participation in humanitarian assistance significantly during the past year. In response to the African famine, DoD flew emergency airlift missions and provided relief supplies to Sudan, Mali, Zaire, Niger, and Mozambique. Additionally, we dispatched medical teams to Somalia and Sudan and installed and operated a pontoon ferry in Mali. During the Mexican earthquake and Colombian volcano disasters, we provided equipment, personnel, and airlift to meet urgent requirements.

In keeping with statutory requirements, most DoD humanitarian assistance efforts are requested and funded by the Department of State (DoS) and the Agency for International Development (AID). However, recent congressional initiatives have expanded DoD's capability and responsibility for humanitarian activities. In support of the Denton Amendment, which was effective at the start of FY 1985, DoD provided space available airlifts/sealifts of privately donated humanitarian supplies to Central America, delivering over 400,000 pounds of humanitarian cargo. The McCollum Amendment now allows DoD to provide excess nonlethal materials to DoS and AID for use in worldwide humanitarian assistance efforts. DoD's participation in providing humanitarian transportation and supplies to the Afghan people will play an important role in supporting our national objectives.

Project Handclasp, the Navy's highly successful people-to-people program, continues to provide effective, visible humanitarian assistance throughout the Third World. In addition, our unified commands carried out numerous medical treatment and small infrastructure projects incidental to authorized operations, such as schools, clinics, roads, and water/sanitation systems. Such civic action programs help our friends and promote our own proficiency by providing training, on-site experience, and a deep sense of achievement for our forces. I am determined that we will continue to work with other U.S. agencies to expand our humanitarian efforts.

4. The North Atlantic Treaty Organization (NATO)

The North Atlantic Treaty Organization was established as a response to Soviet expansion in Eastern Europe. Today, a strong NATO alliance remains essential to meeting the Soviet and Warsaw Pact challenge. As the Soviets continue to improve and expand their forces, NATO must choose either to modernize and improve its own forces in order to maintain a credible balance, or become more vulnerable to aggression and coercion by the Soviets.

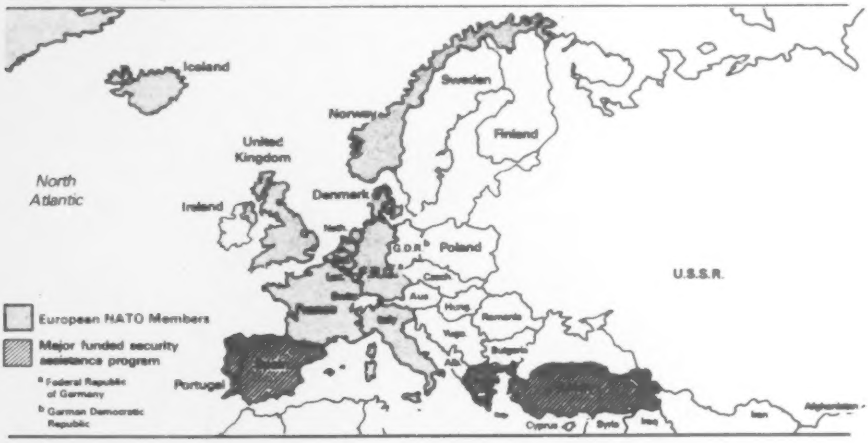
a. United States Forces

As an alliance member, the United States stations military forces in Europe and pledges to augment these forces in the event of a Warsaw Pact attack. The United States also furnishes a significant portion of NATO's naval forces, the great bulk of NATO's "external" strategic nuclear forces, and nuclear weapons for NATO's nonstrategic nuclear forces, including U.S.-manned forces.

Our forward force contributions to the alliance and allied burdensharing have significantly reduced the cost to the United

States of deterring Soviet aggression in Europe. Because we forward-deploy forces, we need not buy and maintain the additional airlift assets we would need to deploy those forces rapidly in an emergency. Stationing our forces abroad also spares us the cost of constructing and maintaining facilities for them in the United States.

Chart III.F.2
Western Europe — NATO Area


Iceland
Sweden
Norway
Finland
United Kingdom
North Atlantic
Ireland
Denmark
Neth.
G.D.R.b
Poland
F.R.G.a
U.S.S.R.
Lux.
Czech
Belg.
Aus.
France
Hung.
Romania
Italy
Yugo.
Bulgaria
Alb.
Portugal
Cyprus
Syria
Iraq
Iran
Afghanistan
European NATO Members
Major funded security assistance program
a Federal Republic of Germany
b German Democratic Republic

The level of our troop strength in Europe is currently constrained by a congressional ceiling. In DoD's view, defense manpower levels and locations should be determined based on how best to counter threats to U.S. security interests within the limits of a politically acceptable defense budget. The Congress, as overseer of the Department of Defense, needs to know where defense uses its allotted resources, including authorized manpower, but should not seek to micromanage U.S. troop strength on a theater basis. The current limit on troop strength in Europe is an artificial subceiling within the overall ceiling on Service end strengths. This subceiling distorts the process of allocating available manpower to meet the threat, and confuses the general debate about how much is enough for defense. In addition, the European subceiling reduces the conventional defense contribution of the United States to NATO since the obligation to deploy and man intermediate nuclear forces in Europe must be accomplished within this ceiling. This significantly undercuts the emphasis on conventional defense mandated by NATO Defense Ministers and currently stressed by the Congress.

Our alliance partners also make force contributions that, in the aggregate, exceed our own in a number of key categories. The NATO allies maintain three and one half million active duty military personnel, compared with a little over two million for the United States. If civilian defense manpower and committed reserve personnel (i.e., those reservists with specific post-mobilization assignments) are included, the totals come to just under eight million for our NATO allies and just under five million for the United States. In terms of ground combat strength (expressed in armored division equivalents) and tactical airpower (numbers of combat aircraft), the non-U.S. NATO allies would contribute roughly 60 percent of NATO's total combat systems in war.

b. Challenge

NATO's policy of collective defense will remain viable only as long as the Soviet Union does not gain such a preponderance of power that our partners fear the consequences of maintaining the alliance. To counter the threat of Soviet coercion or aggression in Western Europe, NATO maintains -- and must continue to improve -- strong military forces. NATO's strategy of flexible response relies on a stable and vigorous deterrence and a credible forward defense. The United States must continue to play a major role in this effort.

c. Risks

The Soviet/Warsaw Pact threat is growing. The principal risk we face in NATO defense is complacency in the face of this threat. While NATO has kept the peace, it has not nearly matched the Warsaw Pact military buildup. The NATO allies, including the United States, cannot afford to neglect their responsibility to maintain a credible and stable defense posture; we must improve defense capabilities over the long-term.

d. Planning

NATO has greatly expanded its long-term defense planning efforts. In December 1985, NATO defense ministers endorsed a conceptual military framework for long-term defense planning. Closer consultation between NATO commanders and the NATO governments on long-term planning will lead to better use of NATO defense funds.

e. Security Assistance

Our security assistance programs with the four southern tier countries -- Spain, Portugal, Greece, and Turkey -- help strengthen Western defenses among our historic allies. Turkey's critical location places it at the nexus of our security interests in NATO, the Middle East, and Southwest Asia. But it must modernize its obsolescent military equipment if it is to meet its agreed-upon force goals, which are the minimum necessary to meet the anticipated threat.

f. Burdensharing

In order to maintain peace, all members of the NATO alliance must be willing to share the burden equitably. However, there is no universally accepted formula for calculating each country's fair share. My Annual Report to the Congress on the Allied Contributions to the Common Defense considers a wide range of factors from which we conclude that while our NATO allies make a substantial contribution to the common defense, some allies are doing their full share while others less.

Given the NATO/Pact conventional force imbalance, I have emphasized the need for increased defense efforts. I am gratified to report considerable progress by our allies in this regard. Our allies have agreed to increase substantially the NATO infrastructure program along with their holdings of critical ammunition stocks. They have also continued to increase their defense outlays. We will continue to encourage our allies to do more.

g. International Armaments Cooperation

Technology continues to offer the alliance the opportunity of enhanced performance and greater efficiency. The NATO Conference of National Armaments Directors is following up the 1982 "Emerging Technologies" initiative by focusing attention on the development of specific force multiplier systems. Initial projects may achieve early 1990's in-service dates; longer-term development projects are also being undertaken. The Congress provided strong support for U.S.-allied arms cooperation in FY 1986 by earmarking $200 million for NATO cooperative research and development programs, appropriating $100 million in new funding for these efforts, establishing a program for side-by-side comparative testing, and passing enabling legislation for flexibility in contracting.

h. Host Nation Support and Cooperative Logistics

Host Nation Support (HNS) arrangements are in effect with several European countries. During peacetime, functions such as surface transportation, POL distribution, and port operations are provided to U.S. forces. In wartime, we depend on continuation of these functions and others, such as airfield damage repair, installation security, and ammunition handling.

When we and our NATO allies field the same weapons systems in the European theater, it makes sense to cooperate on logistics support programs for those systems. Toward that end, the United States recently joined Weapon System Partnerships at the NATO Maintenance and Supply Agency (NAMSA) for Patriot and the Multiple Launch Rocket System; we are pursuing similar arrangements for TOW and Lance. We have contracted with NAMSA for repair of AIM-9Ls and storage of war reserve materiel. We also are working toward consolidated procurement of common NATO munitions.

i. Special Programs

(1) Conventional Defense Improvements

For the strategy of flexible response to remain credible, the NATO triad of forces must be in proper balance. Conventional force improvements are necessary in order to restore the deterrent value of this leg of the NATO triad, particularly in the face of continuing qualitative and quantitative Warsaw Pact advances. Conventional force improvements also respond to the growing congressional and public desire to reduce the need to rely on early recourse to nuclear weapons.

There is considerable agreement among NATO governments on the need to improve conventional defenses. At the May 1985 Defense Planning Committee (DPC) meeting, NATO ministers approved the Report on Conventional Defense Improvements that identified critical deficiencies in NATO's conventional defense and outlined a plan of action to overcome those deficiencies. The task remains to carry out this plan of action. NATO nations have reported some progress this year, and we expect key force planning improvements to be specified in the 1987-92 NATO force goals that the alliance will approve in the spring. NATO nations have already agreed to make a special effort to implement the most critical conventional force goals designated by NATO military authorities.

(2) Nuclear Planning

NATO's Nuclear Planning Group (NPG) is responsible for coordinating matters involving NATO's nuclear forces. At present, all members of the alliance except Iceland and France are represented on the NPG and one of its subsidiaries for special projects, the High Level Group.

The High Level Group (HLG) prepared the analyses and recommendations that led to NATO's December 1979 decision to deploy Pershing II missiles and ground-launched cruise missiles (GLCMs). A separate group, the Special Consultative Group (SCG), set up under the North Atlantic Council, laid the groundwork for the other half of the two-part December 1979 decision -- the commitment to seek, through negotiations with the Soviet Union, a balanced, equitable, and verifiable agreement limiting those missiles. The HLG also conducted the study of the alliance's nuclear needs that led to the October 1983 decision by the NPG at Montebello to reduce by 1,400 the number of nuclear weapons deployed in Europe, while ensuring that the remaining warheads and their delivery systems remain responsive, survivable, and effective. In March 1985, the Supreme Allied Commander Europe made recommentations to the NPG on implementation of these reduction by the end of 1988 and on necessary improvements to remaining systems. The reductions are under way and include the withdrawal, completed in 1985, of all atomic demolition munitions from the NATO stockpile in Europe.

(3) Infrastructure

Under the NATO infrastructure program, alliance members share the costs of constructing facilities for the use of their forces in war. Thirteen NATO nations contribute to the full infrastructure program. France joins the common funding for air defense warning installations. (Iceland has no military forces and Spain does not participate in the infrastructure program at this time.) This burdensharing effort contributes enormously to the effectiveness of NATO's conventional forces. Recent NATO agreements on improved procedures and substantial funding increases should result in an even greater contribution in the future.

In December 1984, NATO ministers approved a funding ceiling of over $8 billion for the FY 1985 to FY 1991 period. This funding, along with a much improved planning system and a NATO agreement to provide funds for project design up to three years before project implementation, will help ensure construction of badly needed support facilities. For example, we expect that by 1991 all required minimum essential facilities and essential operating facilities along with most shelters for reinforcing aircraft will be completed or under construction.

All NATO countries benefit economically from this program. Host countries receive the benefit of new installations and peacetime maintenance and operations contracts; all member countries compete for commercial contracts for construction and related goods and services; and the user nations benefit from allied contributions to facilities that their forces will use. While the United States contributes 27.8 percent of total infrastructure funding, a full 35 to 40 percent of the programmed projects directly support U.S. forces.

The infrastructure program funds only those facilities needed for wartime operations. Personnel support facilities and other peacetime related projects are funded by each country according to its own standards. Were such construction to fall under common funding, our cost would far exceed what we spend today for our own forces in Europe. Therefore, we would oppose broadening NATO infrastructure coverage to peacetime use facilities.

5. Southwest Asia and the Middle East

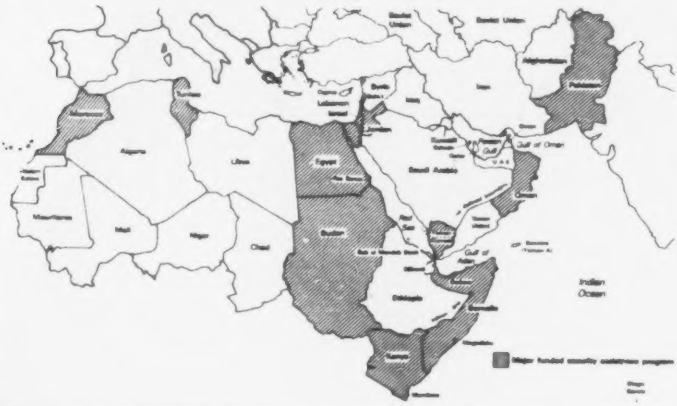
Political and military instability in Southwest Asia (SWA) and the Middle East continue to pose complex and dynamic challenges for U.S. defense planning. President Reagan has steadfastly reaffirmed our commitment to protect U.S. and free world interests in the region, especially the pursuit of a lasting Arab-Israeli peace and continued access to Persian Gulf oil.

Over the past several years, we have improved our military capabilities for the region, primarily by enhancing the readiness and mobility of existing forces. Our plans, programs, and command structure provide us with a broad range of capabilities in those areas and contribute to our effort to revitalize our rapid-response capabilities.

Chart III.F.3 depicts the general areas we refer to as Southwest Asia, the Middle East, and North Africa.

Chart III.F.3

Southwest Asia, the Middle East, and North Africa


Soviet Union
Soviet Union
Afghanistan
Pakistan
Iran
Persian Gulf
Gulf of Oman
U.A.E.
Saudi Arabia
Oman
Tunisia
Morocco
Algeria
Libya
Egypt
Mauritania
Mali
Niger
Chad
Sudan
Gulf of Aden
Ethiopia
Somalia
Kenya
Indian Ocean
Major funded security assistance program

a. U.S. Forces

Table III.F.1

Combat Forces Initially Available to USCENTCOM

Army	Air Force
1 Airborne Division 1 Airmobile/Air Assault Division 1 Mechanized Infantry Division 2 Infantry Divisions	7 Tactical Fighter Wings[b] 2 Strategic Bomber Squadrons[c]
Marine Corps	**Navy**
1-1/3 Marine Amphibious Forces[a]	3 Carrier Battle Groups 1 Surface Action Group 5 Maritime Patrol Air Squadrons

[a] A Marine Amphibious Force typically consists of a reinforced Marine division, a force service support group, and a Marine aircraft wing (containing roughly twice as many tactical fighter/attack aircraft as an Air Force tactical fighter wing, as well as a helicopter unit.)
[b] Includes support forces. Does not include 3-1/2 tactical fighter wings available as attrition fillers.
[c] These bombers would be accompanied by reconnaissance, command and control, and tanker aircraft.

The primary responsibilities of the Commander in Chief, United States Central Command, (USCINCCENT) are to ensure continued Western access to Persian Gulf oil; to deter Soviet aggression and preserve regional stability; and to reduce Soviet regional influence.

Although, most of our general purpose forces could be used for rapid-response missions, we have identified certain of our most mobile and ready units for priority allocation to USCENTCOM in a crisis (see Table III.F.1).

b. The Challenge and Risks

In a tension-filled region such as the Middle East, the danger of expanded conflict is ever-present. In recent years, the proliferation of technologically advanced weapons systems and increased Soviet support -- both direct and through proxies -- has increased the likelihood of terrorism, insurgency, and aggression. Our challenge is to preserve our interests and foster movement toward peace in this difficult context. We must continue to exercise patience, persistence, and imagination in pursuing our regional policies.

In the Persian Gulf area, the primary potential risk, in addition to a continuation of the Iran-Iraq war, would be direct Soviet exploitation of Iran's unsettled conditions stemming from the effects of long-term fighting and economic deprivation. Our challenge is to help friendly nations in the region preserve their freedom in the face of growing threats and to ensure Free World access to Persian Gulf oil.

In the Eastern Mediterranean, our primary objective is to help foster a peaceful resolution of the Arab-Israeli conflict. King Hussein, Prime Minister Peres, and President Mubarak have shown courageous leadership in their efforts to advance the peace process. We will continue to support their efforts and assist their nations in countering the threats posed by those hostile to peace.

c. The Recent Record: Improving Our Posture

We are making gradual but steady progress in discussions with several friendly countries concerning requirements for mutual support of our military forces in a crisis. For example, the Egyptian government has periodically reaffirmed its willingness to allow us temporary access to its facilities in the event the United States is invited to come to the defense of a friendly Arab country.

Negotiations and plans for obtaining such support must consider differing strategic priorities and perceptions of nations in the region; the absence of an indigenous integrated command structure and common operational concepts; major geographic barriers; political instabilities; and stong religious and cultural cleavages. Nations in the region are generally nonaligned, and all are wary of perceived superpower insensitivity to their sovereignty. We have approached several SWA countries with requests for host nation and contingency support and for permission to preposition U.S. materiel. We have achieved some successes and discussions are continuing.

We have improved our regional posture through exercises, security assistance, and enhanced presence. Beginning in 1980, the United States has developed an extensive exercise and training program with several regional states. The experience and training benefits for U.S. troops have been invaluable as we learned how to adjust for the unique characteristics of the region, including the harsh and diverse climatic conditions. Substantial benefits accrue to friendly regional states as well.

The United States and several Arab countries benefit from combat and military support exercises in the theater. Our most recent major exercise, BRIGHT STAR 85, lasted about 45 days and involved more than 9,000 U.S. troops in three countries. In Egypt, U.S. and Egyptian staffs worked side-by-side to coordinate and control diverse activities, including a major live-fire exercise where U.S. and Egyptian forces repulsed a simulated attack on a key airfield. The United States and Jordan also conducted a series of combined exercises, many of which were a continuation of annual U.S.-Jordanian exercises. Moreover, building on experience from previous BRIGHT STAR scenarios, U.S. and Somali forces joined in combined operations and command post exercises.

To promote better understanding between the United States and friendly regional states, we have established several bilateral consultation groups. An important feature of our defense cooperation with Egypt involves annual meetings of the U.S.-Egyptian Military Coordinating Committee (MCC), a high-level forum for the planning, coordination, and discussion of security projects of mutual interest. The United States and Jordan conduct annual meetings each fall under the aegis of the U.S.-Jordan Joint Military Commission (JMC). Established in 1974, the JMC is the forum in which all outstanding security-related issues are reviewed.

The United States has also entered into a cooperative effort with Israel called the Joint Political-Military Group (JPMG). Among many issues considered by the group are combined planning, joint exercises, and requirements for prepositioning of U.S. equipment. Under the JPMG's guidance, the United States and Israel have also conducted a series of combined exercises that covered a range of activities beneficial to both nations.

We continue to deploy U.S. E-3A AWACS and tanker aircraft in Saudi Arabia and support Saudi and Gulf Cooperative Council efforts to enhance the security and freedom of navigation in the Gulf. In addition, as one step toward our goal of achieving a lasting Arab-Israeli peace, U.S. troops participate in Sinai peacekeeping operations as part of a Multinational Force and Observers program.

d. Security Assistance

In the Middle East and Southwest Asia, our financing and cash sales programs have helped regional states contain the Iran-Iraq war in the Gulf, encouraged the search for peace between Israel and its neighbors, and helped ensure the unimpeded flow of critical resources to the West. These programs have helped secure U.S. access and power projection assets necessary to deter aggression and protect critical sea-lanes.

e. International Armaments Cooperation

Several regional nations play an important role in the exchange of military technologies and goods and in the denial of militarily critical technologies and goods to our adversaries.

Cooperation with Israel continues and has provided valuable battlefield information to our Services. The U.S.-Israel Memorandum of Agreement has led to significant exchanges of technical information, cooperative R&D programs, exchanges of scientists and engineers, and U.S. procurement of proven Israeli weapons systems. We are also continuing our armaments cooperation with friendly Middle East nations -- especially Egypt. We expect thereby to assist them in their military modernization efforts.

Our defense industrial cooperation agreement with Pakistan constitutes a significant element in our overall security relationship. This agreement is designed to improve Pakistan's industrial base and to complement U.S. security assistance support to that nation in aircraft, ammunition, communications, and armor. Evolving technical cooperation with India is a dynamic development that is being pursued in the wake of presidential initiatives.

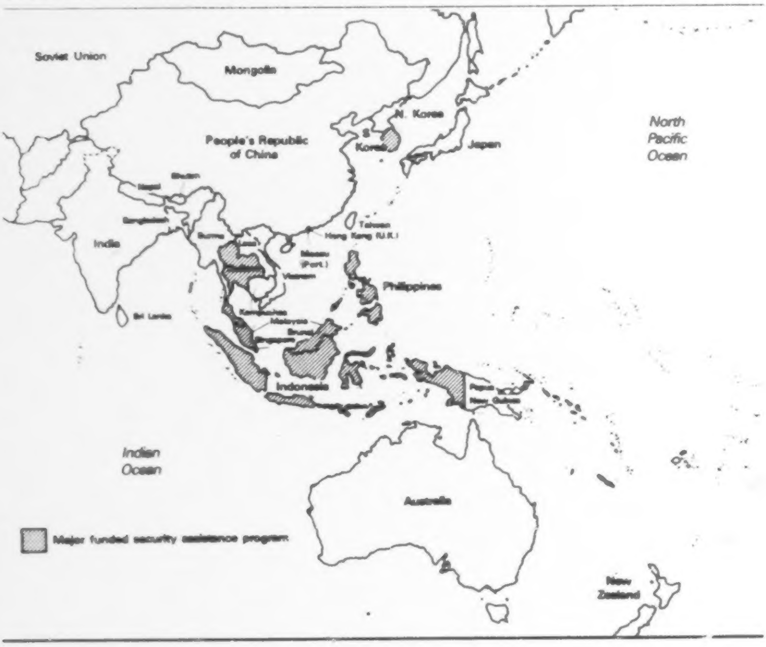
f. Special Programs

The United States and Egypt have initiated several projects outside the FMS program designed to improve Egyptian defense capabilities while contributing to the ability of U.S. forces to respond to contingencies in the area.

The United States and Israel have concluded agreements that should help bolster the Israeli economy and strengthen U.S.-Israeli relationships. The Free Trade Area Agreement will guarantee Israeli access to U.S. markets. The U.S.-Israel Memorandum of Agreement also allows Israel to compete with U.S. firms for some DoD contracts. Israel has also been invited to participate in the Strategic Defense Initiative (SDI) project.

6. East Asia and the Pacific

Chart III.F.4
East Asia and the Pacific


Soviet Union
Mongolia
N. Korea
S. Korea
Japan
North Pacific Ocean
People's Republic of China
Bhutan
Nepal
Bangladesh
India
Burma
Laos
Taiwan
Hong Kong (U.K.)
Macau (Port.)
Vietnam
Philippines
Kampuchea
Sri Lanka
Malaysia
Brunei
Singapore
Indonesia
Papua New Guinea
Indian Ocean
Australia
▨ Major funded security assistance program
New Zealand

East Asia and the Pacific (depicted in Chart III.F.4) have important economic and security ties to the United States. Almost 35 percent of U.S. trade is conducted with the nations of this region, and five of our eight mutual security treaties link us with East Asian or Pacific nations. The commitments derived from these economic and security relationships require a strong and visible U.S. presence to deter the Soviet Union, North Korea, and Vietnam from interfering with the independence and stability of our friends and allies.

a. U.S. Forces

The U.S. Commander in Chief, Pacific (USCINCPAC), with headquarters in Hawaii and forces spread across the western Pacific and Indian Ocean, has geographic responsibility for over 50 percent of the earth's surface. Major units available to USCINCPAC are shown in Table III.F.2.

Table III F2

Forces Available to USCINCPAC

Army

1 Infantry Division (Korea)
1 Infantry Division (Hawaii)

Marine Corps

Portions of 1 MAF (Japan)
1 Marine Brigade (Hawaii)
1 MAF (California)

Air Force

1 Strategic Bomber Squadron
11 Tactical Fighter Squadrons
5 Tactical Support Squadrons

Navy

6 Carriers with Air Wings
89 Surface Combatants
32 Amphibious Ships
40 Attack Submarines
12 Maritime Patrol Aircraft Squadrons

By helping Korea, Thailand, and the Philippines cope with ongoing conflicts or threats, we contribute directly to our own defense as well. Our efforts to assist the Philippines in coping with a growing armed insurgency are made even more important because our facilities at Philippine bases support U.S. presence throughout the region. We would find it very difficult to replace these facilities with comparable ones, and it is, of course, impossible to duplicate the geographic advantages of the Philippines.

b. The Challenge of Preserving the Independence and Stability of our East Asian and Pacific Allies

The Soviet Union's relentless drive to increase its military power and expand its influence in East Asia and the Pacific continues unabated. Since early 1984, we have seen more Soviet strategic and intermediate-range missiles deployed in the region. The Soviet navy deployed a second aircraft carrier and an Ivan Rogov-class landing ship to the Pacific. Modernization of the Soviet air force units in the Far East also continued. Most significantly, the Soviets improved their massive air and naval base at Cam Ranh Bay, Vietnam. It is now the largest forward deployment base and staging facility outside the Soviet Union. Operating from Cam Ranh Bay, Vietnam, Soviet air and naval forces could strike U.S. military units and facilities in the Pacific as well as interdict vital sea lines of communications in the South China Sea. The buildup of the Soviet capability in the region is clearly aimed at the United States and its regional friends and allies.

The Soviet Union poses the greatest challenge to U.S. interests in East Asia and the Pacific, but it is clearly not the only security threat in the region. Maintaining peace and stability in Northeast Asia -- where the interests of the United States, Japan, China, and the Soviet Union converge -- is a vital concern of the United States. Renewed conflict on the Korean peninsula would endanger regional stability and test the political relationships of the major powers. For more than 30 years, the joint efforts of the United States and the Republic of Korea (ROK) have deterred North Korean aggression. Our support to the ROK under the Mutual Defense Treaty of 1954 and, in particular, the presence of U.S. air and ground forces in Korea, have played a key role in this deterrence. In recent years, however, North Korea has undertaken an extensive military reorganization and redeployment including repositioning of ground combat forces nearer the DMZ. This has seriously reduced the warning time available to U.S. and ROK forces should North Korea determine to launch an attack. Additionally, Soviet MiG-23 aircraft have been provided to North Korea. Thus, we face both a greater risk of conflict and a greater challenge to deter or, if deterrence were to fail, to defend effectively against North Korean aggression. We are committed to meeting this challenge to regional security by maintaining our own strength and helping the ROK build its capability for self-defense.

Our developing defense relationship with China is based on a commonality of security interests. A secure, modernizing China can be a force for peace and stability in East Asia and the world. In this context, the United States can play a positive role in China's defense modernization through high level dialogues, functional military exchanges, and military technological cooperation in areas that will enhance China's ability to defend itself against external threats.

The Cambodian people continue to suffer under a brutal Vietnamese military occupation. At the same time, the large Vietnamese force in Cambodia threatens our ally, Thailand. We are committed to help the Thai government meet regional threats and defend its borders against Vietnamese aggression.

We are deeply concerned about the deteriorating political, economic, and security situation in the Philippines. The rapidly growing communist insurgency, in particular, presents a serious threat to the Philippine government and the future of the nation. The reversal of current trends in the Philippines will not be an easy task. Recent government initiatives in the area of military, political, and economic reform hold promise, but progress in the restoration of democratic institutions, revival of the economy, and reduction of domestic violence is necessary if the Philippine government is to cope with the challenge of communist insurgency. The armed forces of the Philippines have a solid core of loyal, professional officers capable of correcting the military's internal problems while aggressively pursuing a successful counterinsurgency strategy. Too often in the past, however, resources and leadership problems have thwarted progress against the insurgency. The United States will continue to meet its commitments, encourage the energetic implementation of military reforms, and support the amelioration of the conditions that fuel the communist insurgency.

c. Fulfilling our Security Commitments in the Region

The size of the East Asian and Pacific region and the limited availability of U.S. forces require strong cooperation with our friends and allies to meet threats posed by potential adversaries.

(1) Japan

Our defense partnership with Japan, based on the Treaty of Mutual Cooperation and Security, remains the cornerstone of our defense policy in East Asia. Japan's 1986-1990 defense program, if fully carried out, should provide the minimum necessary capability to meet Japan's national defense goals of territorial, air, and sea-lane defense out to 1,000 miles. Owing to Japan's unique geostrategic location astride routes of egress from major Soviet Far East operating bases, an effective Japanese self-defense capability would be a major contribution to local, regional, and, indirectly, to global deterrence.

(2) Republic of Korea (ROK)

U.S. and ROK forces face a growing North Korean military threat. North Korea could today launch a massive attack with minimal warning. Together with the ROK and our United Nations partners, we must continue to strengthen U.S. and ROK capabilities. With U.S. assistance, ROK ground and air forces are modernizing and improving their ability to conduct joint operations. U.S. forces conduct major live-fire exercises with the ROK each year, including TEAM SPIRIT. We are also helping Korea improve its command, control, communications, and intelligence (C^3I) systems, upgrade its petroleum storage facilities and contingency airfields, and enhance the overall sustainability of its forces. The ROK provides significant peacetime host nation support to U.S. forces in Korea through the Combined Defense Improvement Projects (CDIP) program, much of which would continue in time of war.

(3) The Philippines

The Mutual Defense Treaty of 1951 and the Military Base Agreement of 1947 are the foundation of our security relationship with the Philippines. U.S. military facilities there permit a continuous air and naval presence in East and Southeast Asia and support U.S. forces operating in the western Pacific and Indian Ocean. The proximity of these facilities to the international sea-lanes connecting the Persian Gulf, Southeast Asia, and Northeast Asia makes them particularly important to the security of the region.

(4) Thailand

Thailand's independence and territorial integrity are critical to the stability of Southeast Asia. The presence of a large Vietnamese military force in Cambodia poses a direct threat to the security of our treaty ally, Thailand. During the past year, we have helped Thailand modernize its armed forces through our security assistance program, conducted bilateral combined exercises with Thai forces, and signed a new agreement to facilitate logistics cooperation. We will continue to provide Thailand with military assistance and training to bolster its self-defense capability.

(5) Australia and New Zealand

The ANZUS treaty, which links us with two of our oldest allies, Australia and New Zealand, remains under severe strain because of New Zealand's port access policies. Although the treaty remains in force, our security cooperation with New Zealand has been appropriately reduced. Enactment by New Zealand of adverse legislation continuing the port access ban will cause us to review our security obligations to New Zealand under ANZUS. Bilateral cooperation with Australia, under ANZUS, continues to serve as the foundation for our mutual security efforts in the South Pacific.

d. Security Assistance

In East Asia and the Pacific region, security assistance and cash sales augment other policy instruments to achieve stability and political independence. The bulk of security assistance will help to deter external threats to Korea and Thailand and to enhance our close military relationship with the Philippines by helping that nation cope with a communist insurgency. Our programs in other ASEAN countries are consistent with our strong support for ASEAN and are aimed at supplementing those countries' efforts at self-defense, which is crucial for regional stability.

In the Philippines, U.S. security assistance funds are slated to help modernize the Philippine armed forces, especially in the areas of mobility, communications, and support for existing U.S.-origin equipment. In Thailand, our security assistance supports the government's efforts to improve social and economic conditions in the Thai-Cambodian border areas, which have experienced a large influx of refugees as a result of continued attacks by Vietnam. The threat from Vietnamese forces to Thailand also underscores the importance of our efforts to help the Thai government modernize its armed forces. To maintain support for South Korea, we propose to use FMS funds to augment Korea's efforts at improving the combat capabilities of its forces, many of which are stationed with our forces along the demilitarized zone and would operate with us under a joint command in time of war.

e. International Armaments Cooperation

Through technological consultation and cooperative armaments developments, most notably in tanks, communications equipment, and tactical missiles, we will continue to strengthen Korea's conventional force capabilities.

As Japan has a considerable technology base that could benefit U.S. defense systems, we have expanded our efforts to develop technology and systems cooperation with that country, with particular emphasis on encouraging a flow of Japanese military technology to the United States. The benefits of increased cooperation with Japan are:

-- A strengthened U.S. industrial base, resulting from the stimulus of technology in those areas in which Japan has a lead;

-- More efficient use of our R&D resources as we avoid duplicating Japanese development efforts and focus our attention on developing and introducing better systems sooner; and

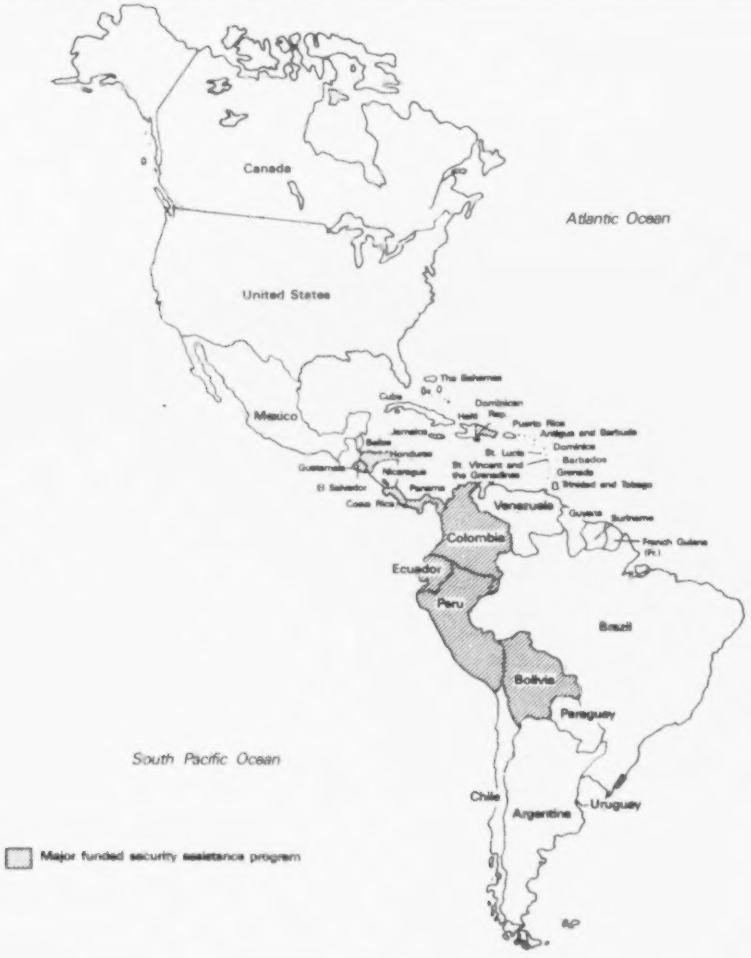
-- Improved interoperability, thereby strengthening the security force structure in the northern Pacific.

Our technology cooperation efforts with Japan call for Service and industry experts in specific mission areas to assess the threat and the technologies available to meet that threat, and to identify applicable systems and technologies. The first two such groups have been established in the air defense and communication systems mission areas, and we are discussing procedures for the transfer of Japanese military technology to the United States.

Cooperative programs with Australia continue to progress and new initiatives are under discussion. In Southeast Asia, programs of mutual benefit are being explored with Indonesia and Singapore, and we are working closely with other nations in the area against a backdrop of greater Soviet presence in the South China Sea and the Pacific Ocean.

7. Western Hemisphere

Chart III.F.5
Western Hemisphere


Canada
Atlantic Ocean
United States
The Bahamas
Cuba
Dominican Rep.
Haiti
Puerto Rico
Mexico
Jamaica
Antigua and Barbuda
Belize
Honduras
Dominica
St. Lucia
Barbados
Guatemala
St. Vincent and the Grenadines
Grenada
Nicaragua
Trinidad and Tobago
El Salvador
Panama
Costa Rica
Venezuela
Guyana
Suriname
Colombia
French Guiana (Fr.)
Ecuador
Peru
Brazil
Bolivia
Paraguay
South Pacific Ocean
Chile
Argentina
Uruguay
▨ Major funded security assistance program

Our primary defense objective is to maintain the security of North America, the contiguous Caribbean Basin, and the sea and air approaches that link us to the rest of the world. We share the world's longest undefended border with Canada, a strong ally that assists in our mutual defense. We also share a heritage with our Latin American allies. The Rio Treaty and the Canada-U.S. Basic Security Plan reinforces our commitment to regional security.

a. U.S. Forces

Considering the close proximity of the Caribbean Basin to the United States, the small number of forces stationed there does not reflect the real significance of U.S. strategic interests in the region. This region has been and continues to be an economy of force area.

The Commander in Chief, U.S. Southern Command (USCINCSOUTH), with headquarters in Panama, has responsibility for U.S. military forces stationed in Central and South America. The Commander in Chief, U.S. Atlantic Command (USCINCLANT), headquartered in Norfolk, Virginia, has responsibility for the Caribbean and waters adjacent to Central and South America.

The United States has about 10,000 military personnel in SOUTHCOM, including an Army brigade and small Air Force and Navy elements in Panama, primarily to protect the Canal. The United States also has naval bases in Puerto Rico and at Guantanamo Bay, Cuba, and maintains a continuous naval presence in the Caribbean to protect the sea lines of communications.

b. The Challenge

The primary objectives of U.S. policy in this region are to foster democracy, reform, and human freedom; support economic development; support dialogue and negotiations; and provide a security shield under which these elements can be nurtured. The Soviet Union and its proxies -- Cuba and Nicaragua -- continue to take advantage of the social, political, and economic instabilities of the region in hopes of expanding their Marxist-Leninist foothold in Central America and the Caribbean. Communist penetration near our southern border and our Caribbean flank presents a direct threat to our security interests and those of our neighbors. The Caribbean Basin is the strategic crossroads of this hemisphere. Cuba and other Caribbean Basin countries sit astride major sea lines of communications that are vital to our security and economic prosperity. Soviet/Cuban strategy expands the threat to our Caribbean lifeline with their support of the military buildup in Nicaragua and destabilizing guerrilla wars throughout the region. The Soviets would like to repeat their Cuban success in Nicaragua. We must seek effective ways to reduce Soviet presence and influence in this hemisphere and to constrain Soviet-Cuban supported aggression and subversion threatening our neighbors to the south.

c. Risks

Although all of the problems facing the region have not been resolved, enough progress has been made to convince us that our policies to bring peace, democracy, and development to the region are working. Democratic progress in El Salvador exemplifies what can be done when we demonstrate our commitment as a reliable ally. Without unwavering U.S. support, we risk reversal of the favorable trends in El Salvador, i.e., improved performance of the Salvadoran armed forces, reduction of guerrilla combatants, and diminishing guerrilla support among the population. Without the pressure exerted by the Nicaraguan Democratic Forces on the Sandinista regime, the regime will continue to consolidate a communist state based on repression and to support guerrilla wars undermining Nicaragua's neighbors. Moreover, the growing evidence of a connection between drug traffickers, terrorists, and guerrillas, particularly in the Andean countries, adds a new dimension to the threat. Without a firm commitment to provide the assistance and support necessary to combat all forms of low-intensity threats to peace, democracy, and development in this hemisphere, we will continue to confront the alternatives of poverty, dictatorship, and Marxist destabilization accompanied by a massive flow of refugees.

d. Exercises and Training

U.S. military activities in Central America in 1985 consisted primarily of combined exercises and small-unit training deployments to Honduras. Counterinsurgency exercises such as AHUAS TARA, CABANAS, and UNIVERSAL TREK were complemented with smaller exercises such as FULL PLATE and the naval surveillance exercise KING'S GUARD. Additionally, we conducted an engineering training exercise, BLAZING TRAILS, and a canal defense exercise, KINDLE LIBERTY, in Panama. The Central American exercise program demonstrates U.S. commitment to our allies and provides training opportunities that enhance the combat-readiness of our forces to respond to regional crises. Additionally, we conduct several joint and combined exercises annually in the Caribbean including UNITAS (Caribbean Phase), OCEAN VENTURE, READEX, EXOTIC PALM, and UPWARD KEY.

e. Security Assistance to American Republics

In our own hemisphere, Central America is our priority strategic concern. Our assistance programs have concentrated on the defense and economic needs of El Salvador, Honduras, and the other Central American states.

We wish to work closely with Grenada and the other Eastern Caribbean democracies to build up their own security capabilities so that the future involvement of U.S. military forces will not be necessary. The Caribbean area also faces economic problems, drug trafficking, and subversive movements that add to the security concerns of the United States.

South America is struggling with the combined threats posed by weak economies, rampant inflation, high unemployment, excessive population growth, heavy external debts, skewed wealth distribution, illicit drug trafficking, international terrorism, and Marxist-Leninist supported insurgencies. Some of these problems have reached crisis proportions and pose serious security implications for the United States. We have a particular interest in helping the Andean countries maintain their democratic systems, defend against insurgencies and terrorism, and oppose narcotics cultivation and trafficking.

f. International Armaments Cooperation

We are investigating the feasibility of defense industrial cooperation programs in Central America to aid regional countries in assessing their most important military requirements and to improve their defense capabilities. We have enhanced bilateral cooperation with Brazil by participation in scientific and engineering exchanges.

g. Special Programs

Intelligence sharing is a key element of our assistance in Central America. Once again, successes in El Salvador provide a good example of what can be done. The information we have supplied to the Salvadoran armed forces has been used in planning and continuing operations against guerrillas and terrorists. The Salvadoran guerrillas are finding it increasingly difficult to operate in the countryside and have resorted to urban terrorism, a step backward for them. The use of shared information in the pursuit of the guerrilla groups that claimed responsibility for the murder of U.S. Marine guards illustrates the value and effectiveness of intelligence-sharing. We hope to expand intelligence-sharing to assist other countries victimized by guerrilla insurgencies.

The important military-to-military contact program continues in the form of conferences of the Inter-American service chiefs and exchange visits by defense leaders. To ensure that we maintain this contact with future military generations, we are developing a military scholarship program for junior officers and defense force leaders from the Americas to study in the United States. This program will complement professional military education programs already in being by providing our friends and allies in the region an alternative to counter Soviet-bloc and Cuban scholarship programs and to foster an understanding of and support for democracy, the promotion of which is the fundamental objective of U.S. foreign policy in the region. The U.S. Army School of the Americas, formerly in Panama, which had trained Latin American officers for 38 years, closed its doors in September 1984 pursuant to provisions of the Panama Canal Treaty. Because of its major contributions to our security and to the security of our neighbors, the school is continuing to operate from temporary quarters at Fort Benning, Georgia, until a suitable permanent CONUS facility can be found. We will continue to support the security forces of the member states of the Eastern Caribbean Regional Security System, as well as Jamaica and the Dominican Republic. To the extent possible, we will coordinate our efforts with those of allied nations active in the region, particularly the United Kingdom and the Netherlands.

8. Sub-Saharan Africa

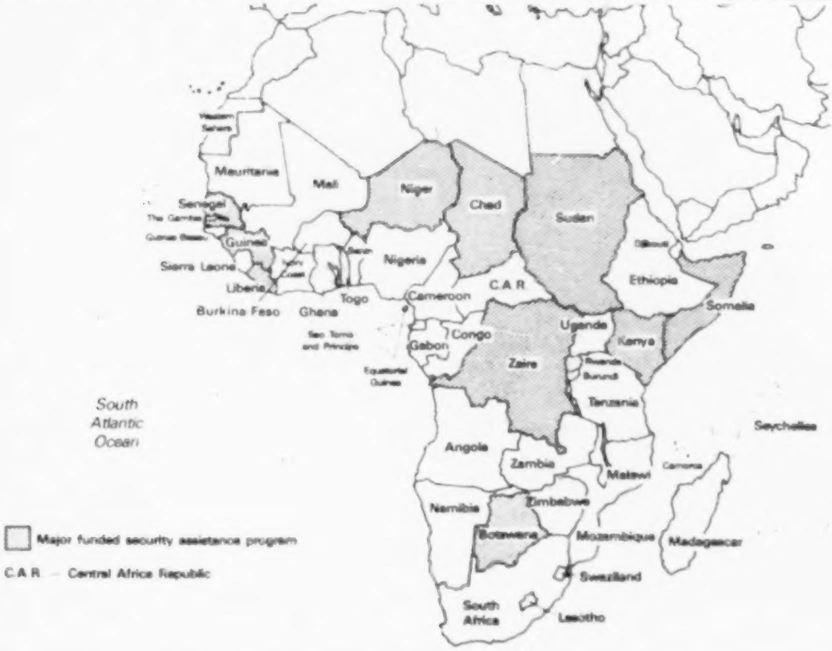
In Africa, our principal objectives are to support the independence and stability of friendly governments; to preserve free access to mineral resources essential for meeting defense and industrial needs of the Western nations; and to deny the Soviet Union and its allies opportunities to make further inroads in the region. These goals are threatened by endemic unrest compounded by Soviet-bloc and Libyan adventurism in the region. The Soviets and their allies continue to unsettle the region through large-scale military supply and advisory efforts. Moreover, a 35,000-man Cuban expeditionary force in Angola continues to aggravate regional tensions and frustrate a peaceful settlement in neighboring Namibia. Libya, supplied primarily by Moscow and its allies, has stepped up its campaign of subversion against neighboring countries and has solidified its military occupation of northern Chad.

a. U.S. Forces

In recognition of these threats and the region's increasing importance, portions of Sub-Saharan Africa have been assigned to three separate unified commands. U.S. European Command (USEUCOM) has responsibility for most of the continent, while the area of responsibility of the U.S. Central Command (USCENTCOM) includes the Horn of Africa -- Egypt, Sudan, Ethiopia, Djibouti, Somalia, and Kenya. Additionally, U.S. Pacific Command (USPACOM) is assigned responsibility for the four Indian Ocean island states adjacent to Africa.

Chart III.F.6

Sub Saharan Africa


Western Sahara
Mauritania
Mali
Niger
Chad
Sudan
Senegal
The Gambia
Guinea Bissau
Guinea
Sierra Leone
Liberia
Ivory Coast
Benin
Nigeria
Djibouti
Ethiopia
Somalia
Burkina Faso
Ghana
Togo
Cameroon
C.A.R.
Sao Tome and Principe
Equatorial Guinea
Gabon
Congo
Uganda
Kenya
Zaire
Rwanda
Burundi
Tanzania
South Atlantic Ocean
Seychelles
Angola
Zambia
Malawi
Comoros
Namibia
Zimbabwe
Botswana
Mozambique
Madagascar
Swaziland
South Africa
Lesotho
▨ Major funded security assistance program
C.A.R. — Central Africa Republic

b. The Challenge and Risks

Over the past few years, we have made substantial progress in implementing security assistance and related programs to counter threats to U.S. interests in the region. Libya's campaign to topple the Chadian government has been stymied; Ethiopia's incursions along the Somali border have been contained; and rebel activities in eastern Zaire have been checked by government forces. Moreover, security assistance programs have been initiated in such countries as Guinea and Madagascar to reinforce their shift from heavy dependence on the Soviets toward a more nonaligned posture.

Nevertheless, many parts of Africa are volatile, and serious reversals are entirely possible, especially should Western attention flag or resources devoted to the continent's numerous trouble spots dwindle. Libya's subversion campaign is resurgent, with Tunisia and Chad as prime targets. Southern Africa is in turmoil, with Soviet arms deliveries to Angola increasing both quantitatively and qualitatively. Many countries in the Sub-Saharan region are mired in economic stagnation, struck by extended drought, and desperate for assistance to raise levels of food production. Promoting stability under such conditions requires the diligent application of adequate resources.

c. Security Assistance

The security assistance program in Sub-Saharan Africa concentrates on supporting countries threatened by the Soviets or their clients -- particularly Libya -- with special emphasis on the most vulnerable states of the Sahel and the Horn. We are committed to fostering education and professionalism among the military and assisting the economic development of the region to encourage self-sufficiency.

Although the FY 1987 request is modest in funding terms, security assistance is a significant resource for maintaining and improving our influence in the region in order to further our political and strategic objectives.

The principal DoD activities contributing to stability in Sub-Saharan Africa are our military assistance programs. Since 1981, we have sought to tailor these programs to African conditions. Strengthening the defense capabilities of our African friends requires attention to intractable socio-economic problems in addition to assistance in building basic military capabilities. To avoid overburdening fragile economies with debt, we have almost entirely replaced credit sales with grants. Our FY 1987 security assistance request for this region is over 90 percent grant. This includes funding to continue the Military Civic Action and African Coastal Security programs -- initiatives designed to contribute to nation-building and the economic well-being of Africans. Additionally, the Coastal Security program will help African nations check Soviet overfishing and other exploitative practices. The highly regarded IMET program, which in FY 1987 will reach 40 of the 47 states in the region, promotes military-to-military contacts, enhances professional skills and training, and exposes African military personnel to American values. Our program to enroll African cadets into each of the U.S. service academies also advances these goals.

Our security assistance request reflects our deep concern with instability in the Horn of Africa. Maintaining access to local military facilities in the Horn is a key element of our Southwest Asia strategy. But massive Soviet support for Marxist Ethiopia, Libyan meddling, and unrest stemming from economic stagnation and domestic conflict threaten this strategic goal and other U.S. interests in the region. Accordingly, the three largest U.S. military assistance programs for Sub-Saharan Africa are in Sudan, Somalia, and Kenya. These programs help build basic military capabilities to resist outside aggression and promote domestic stability; increase U.S. contact with host military establishments; and facilitate host nation support agreements.

d. Host Nation Support Agreements

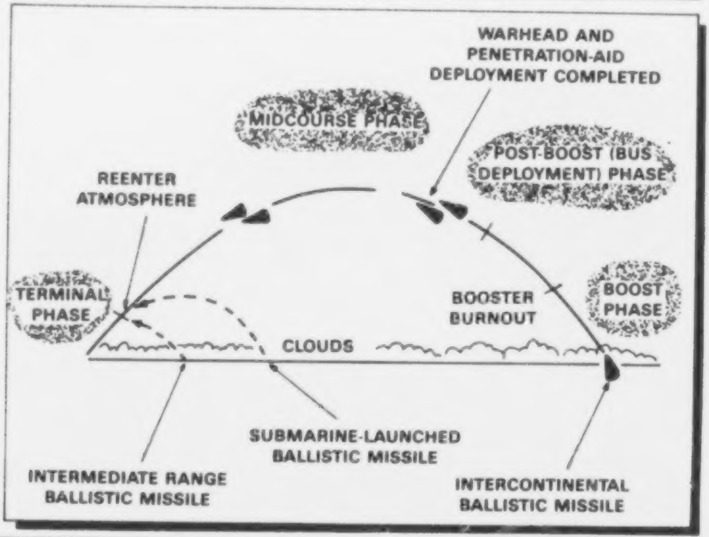
Kenya has allowed us to use its facilities at Mombasa, where we have dredged the harbor and upgraded the airfield with improved navigation aids, utilities, and maintenance facilities. This port is useful for maintaining and refueling our ships, including aircraft carriers, and offers one of the few locations in the region for crew rest and liberty. Somalia has allowed us access to its seaport and airfield at Mogadishu, where we have improved the airfield's pavement and support facilities, and at Berbera, where we have made airfield modifications and port improvements, and have added fuel storage and distribution facilities. In Djibouti, U.S. Navy ships and aircraft use local facilities in support of Indian Ocean operations.

e. Burdensharing

To avoid duplication of effort and build on the extensive experience of other countries outside the region, we are working closely with friends and allies, including the United Kingdom, France, and Italy, in carrying out security assistance and other programs in Africa.

Chart III.G.1.1

Multiple Layered Defense


WARHEAD AND PENETRATION-AID DEPLOYMENT COMPLETED
MIDCOURSE PHASE
POST-BOOST (BUS DEPLOYMENT) PHASE
REENTER ATMOSPHERE
TERMINAL PHASE
BOOSTER BURNOUT
BOOST PHASE
CLOUDS
SUBMARINE-LAUNCHED BALLISTIC MISSILE
INTERMEDIATE RANGE BALLISTIC MISSILE
INTERCONTINENTAL BALLISTIC MISSILE

G. SPECIAL INTEREST ITEMS

1. Strategic Defense Initiative

a. Introduction

In his March 23, 1983 speech, President Reagan described his vision of a world free of the threat of nuclear war. In doing so, he set in motion the establishment of the Strategic Defense Initiative (SDI). He called for an intensive and comprehensive effort to define a long-term research program with the ultimate goal of reducing or even eliminating the threat from ballistic missiles, a vital step toward freeing the world from the fear of nuclear conflict. The Fletcher Study followed and laid the foundation for what became the Strategic Defense Initiative Organization (SDIO).

SDIO was established as a research program to investigate the feasibility of advanced defensive technologies to provide a better basis for deterring aggression, strengthening stability, and increasing the security of the United States and our allies. It also seeks to reduce and, if possible, eliminate the threat posed by ballistic missiles. This research program will provide a future President and the Congress the technical knowledge necessary to support a potential 1990s decision on whether to develop and deploy advanced defensive systems.

SDIO is not a weapons development program, nor is it a program with preconceived notions of what a potential defensive system against ballistic missiles should entail. It is too early in the program to speculate on the kinds of defensive systems -- whether ground-based or space-based -- or on the capabilities that might prove feasible and desirable to develop and deploy. Moreover, nonnuclear defensive weapons are being emphasized. The defense that might evolve from the research program will not be intended to defend our strategic weapons systems. We are considering ways to defend both our territory and that of our allies against the ballistic missile threat. As the work progresses, we are in full consultation with our allies. All research is being conducted in full compliance with the ABM treaty.

In addition to the promise offered by strategic defenses for rendering ballistic missiles obsolete, research has been undertaken as a response to the threat posed by Soviet nuclear and ABM activities. The Soviet Union has failed to show the type of restraint, in both strategic offensive and defensive forces, on which the ABM treaty was based. Their continuous improvement of ballistic missile forces with enhanced hard target kill capability threatens the viability and credibility of our deterrent capability. At the same time, the Soviet Union has continued to pursue a strategic advantage through the development and improvement of active defenses as well as major hardening of their principal assets. These active and passive defenses give the Soviets increasing potential to counter retaliatory forces, especially if our retaliatory capability were degraded by a Soviet first strike. Their significant expenditures on passive defensive measures aimed at improving the survivability of their forces, military command structures, and national leadership poses a very troublesome situation. In the face of these developments, pursuit of the SDI by the United States is both prudent and necessary.

Structured after the framework outlined by the Fletcher Study, the objective of the SDI is to develop a layered defense capability. Earlier defensive systems were fashioned around the idea of a single, terminal defense phase. The difficulties associated with attaining the necessary effectiveness with a single-layer defense, as well as the relative ease with which such a defense could be overwhelmed, made its value questionable. With the advent of rapidly emerging technologies in fields such as data processing, optics, directed energy, sensors, and other related fields, there is new promise of the possibility of engaging a ballistic missile or its warheads at all points in their flight.

The layered defense approach offers a powerful disincentive to a potential aggressor because of the large uncertainties introduced in planning and launching a successful attack. Given the absence of active and passive U.S. defenses today, an attacker must consider only his missile reliability, warhead reliability, yield, and accuracy in seeking to destroy a target. To assure a high probability of success, up to three warheads may be dedicated to a target. When faced with a single layer defense having a 20 percent leakage rate, the number of warheads need be increased by only three to five warheads per target to give the same measure of confidence in destroying the target. However, if faced with a three-layered defense, each layer having an 80 percent effectiveness rate, the attacker would have to deploy literally hundreds of warheads to a single target to obtain the same confidence of success. With a strategic defense potentially having four or more layers, with possible engagement at any point along a trajectory, deterrence is substantially bolstered by this reduction in an attacker's confidence of success. If our objectives of developing reliable defenses are realized, proliferation would be forestalled -- given the fact that even prohibitive increases in numbers of Soviet warheads would not change their inability to destroy U.S. targets if the Strategic Defense Initiative proves reliable and feasible.

At the same time, strategic defenses will be judged desirable only if they are thoroughly reliable. Survivability, of course, is also vital to maintain stability in time of crisis.

b. Program Overview

To carry out this research program SDIO has established five program elements:

-- Surveillance, acquisition, tracking, and kill assessment (SATKA);

-- Directed energy weapons technology (DEW);

-- Kinetic energy weapons technology (KEW);

-- Systems analysis/battle management (SA/BM); and

-- Survivability, lethality, and key technologies (SLKT).

(1) Surveillance, Acquisition, Tracking, and Kill Assessment (SATKA)

SATKA is fundamental to the success of SDI research because it provides the "eyes" for all other program elements. It includes promising technologies with wide ranges of maturity. Among the goals of technology research are:

-- New optical and radar sensors capable of efficiently detecting and tracking multiple objects in a nuclear threat environment;

-- On-board signal and data processing systems capable of performing acquisition, tracking, discrimination, and kill assessment on the sensor platform and passing these results to battle management;

-- Data on observables from ballistic missiles and their warheads; and

-- Experiments to test the integration of these technologies short of ABM components.

(2) Directed Energy Weapons Technology (DEW)

DEW research provides technology for two principal missions:

-- Interactive discrimination of decoys from reentry vehicles; and

-- Boost and post-boost phase intercept.

The ability of directed energy systems to "perturb" objects offers a uniquely direct mechanism for performing midcourse discrimination, so essential for the viability of midcourse intercept.

For the second mission, directed energy weapons would more fully address the fast time line and depresssed trajectory threats and thereby provide critical leverage to reduce the utility of ballistic missiles. The state-of-the-art is being advanced in technologies for:

-- High-power laser and particle beam generation;

-- Optics and sensors for correcting and controlling the high-power beam;

-- Large, lightweight mirrors and lightweight magnets for focusing the beam on targets;

-- Precision acquisition, tracking, and pointing to direct and hold the beam on target; and

-- Control measures to capitalize on features unique to directed energy devices such as the ability to measure and control the energy delivered to a target.

(3) Kinetic Energy Weapons Technology (KEW)

KEW supports a broad range of applications across the full spectrum of a ballistic missile defense including relatively near-term options that could conceivably contribute to a hedge against a Soviet breakout of the ABM treaty. Technologies relating to precision rocket interceptors and hypervelocity guns will be explored to provide potential nonnuclear kill of ballistic missiles in all phases of flight -- boost, mid-course, and terminal. Technology base efforts include:

-- Smart seekers to acquire targets rapidly and provide highly accurate terminal homing;

-- Advanced guidance and control techniques to control interceptor maneuvers for direct impact with targets;

-- Miniature rocket vehicles for boost and mid-course ballistic missile intercept, as well as satellite defense; and

-- Electromagnetic launchers and smart hypervelocity gun projectiles.

(4) Systems Analysis/Battle Management (SA/BM)

Systems analysis/battle management is studying candidate architectures for future defensive systems as well as exploring technologies to implement communications, command, and control for a potential ballistic missile defense. Included here are threat analyses, mission analyses, conceptual design options for defensive architectures, performance requirements definition, and evaluation for all levels of a layered defense.

(5) Survivability, Lethality, and Key Technologies (SLKT)

SLKT addresses some of the most fundamental issues facing SDI -- survivability and lethality. It includes technology for enhancing survivability, reducing uncertainties regarding kill mechanisms and vulnerabilities, evaluation of countermeasures, investigating the needs of SDI logistics, and improvement of space power. The success of SDI is closely linked to our ability to provide electrical power in space as well as placing, operating, and maintaining systems in space. These issues must be resolved before any future decisions with respect to possible development and deployment may be addressed.

c. Progress

Against this background, the SDIO has made significant progress in the past year. It centralized the planning and control of the research program, while decentralizing the execution of specific technology efforts. In doing so, the achievements in program management, resource management, and technical progress are particularly noteworthy.

SDIO effectively managed its funds during this period, despite normal problems of startup and large program growth. Obligation rates for FY 1985 were 94 percent. Actual program expenditures were comparable to similar DoD research activities such as the Defense Advanced Research Projects Agency (DARPA) and the Air Force Research and Development (R&D) Office. This was accomplished while executing approximately 1,000 SDI contracts during the course of the year.

Progress has proceeded in a number of technical areas. Directed energy research in the field of atmospheric compensation has yielded very promising results in technologies that could support the concept of large, ground-based lasers. Work with free electron lasers (FELs) has progressed more rapidly than anticipated, increasing the potential for application of this technology years ahead of schedule. In September, an experiment in which the MIRACL chemical laser destroyed a static Titan booster, demonstrated graphically the lethality of such a device.

The surveillance and sensor areas have witnessed equally impressive progress. Miniaturization and advances in optical sensors have provided rapid gains in SATKA technologies. Multispectral measurements of booster, post-boost vehicle, and reentry vehicle signatures have been obtained by both optical and radar systems. These measurements are necessary to understand threat signatures and will be used in the development of sensor technology. Considerable progress has also been made in imaging, particularly through phased-array radar technology and signal processing improvements. These advances will enhance our ability to identify threat objects. Additionally, significant progress has been achieved in technologies for hardening of high density microelectronic processors and infrared (IR) focal plane arrays against the effect of nuclear radiation that would be experienced during a nuclear exchange.

Electromagnetic launcher, or "rail gun," research in kinetic energy is progressing well. The ability to inject high levels of power to these devices has been demonstrated far sooner than expected. The implications of this are that heavier projectiles could be accelerated and higher, more lethal velocities attained. This adds to the number of possible weapons options that could be considered for an early defensive system.

The SDIO's Innovative Science and Technology Office is sponsoring research at the leading edge of science. Examples of a few of the concepts being explored under their direction include: advanced pulsed power, carbon-carbon composites, laser satellite networking, plasmoids and ion rings, ultra-high-speed computing, optical signal processing, and ultra-shortwave length lasers. Research by scientists at more than 70 universities and academic institutions as well as additional efforts by small businesses, laboratories, and major industry are supporting the work of the program.

The examples listed have been accomplished in the face of significant challenges to program management. The budget for SDI was established at levels essential to meet the direction set forth by the Fletcher Study. Extensive cuts to the SDI budget have led to program delays and reductions to some program efforts. The final result is that overall program success has been put more at risk.

d. Allied Participation

Many of our allies have indicated support for SDI research and in some cases interest in participating. The United States and the United Kingdom recently signed a memorandum of understanding establishing the framework for British participation in the SDI program. Discussion with the Federal Republic of Germany began in January 1986, and the possibility for an agreement similar to the U.K. agreement is promising. We also hope discussions with the Italian government will begin soon. U.S. and allied security remains indivisible and work will continue closely with them to ensure that, as research progresses, allied views are carefully considered. In addition to direct work for the program, their contributions could include innovative university research, individual exchanges, subcontracts to U.S. industry, or associate contractor arrangements.

e. Conclusion

In conclusion, there are several cogent themes that capture the direction and scope of the SDI program that bear repeating:

-- The aim of SDI is to secure and deploy a thoroughly reliable defense against Soviet strategic and intermediate-range missiles. Our research program to determine if we can do this is well under way;

-- Research will last for some years. Our research program is within the ABM treaty limitations, despite Soviet violations of that treaty;

-- It is too early in our research program to speculate on the kinds of defensive systems -- whether ground-based or space-based and with what capabilities -- that might prove feasible and desirable to develop and deploy;

-- The purpose of the defensive options we seek is clear -- to find a means to destroy attacking ballistic missiles before they can reach any of their potential targets;

-- U.S. and allied security remains indivisible. The SDI program is designed to enhance allied security as well as U.S. security. We will continue to work closely with our allies;

-- We are seeking serious Soviet considerations in our negotiations at Geneva on how deterrence can be enhanced through a greater reliance by both sides on new defense systems. Of course, we would not under any circumstances give the Soviets a veto over our future defensive deployments;

-- SDI represents no change in our commitment to deterring war and enhancing stability;

-- For the foreseeable future, offensive nuclear forces and the prospect of nuclear retaliation will remain the key elements of deterrence. Therefore, we must maintain modern, flexible, and credible strategic nuclear forces; and

-- Our ultimate goal is to eliminate nuclear weapons entirely. By necessity, this is a very long-term goal, which requires, as we pursue our SDI research, equally energetic efforts to diminish the threat posed by conventional arms imbalances, both through conventional force improvements, and the negotiation of arms reductions and confidence building measures.

2. Space Systems Operations

To maintain the security of the United States, DoD acquires and operates space systems and pursues advances in related research and technology development. The expansion of Soviet space programs and capabilities has continued to the point where space assets play a major role in their combined arms concept of warfare. The use of space for military purposes is an integral part of Soviet military planning. Our activities in space, partly in response to Soviet actions, are predicated on the fact that we must have free access and use of space. Our current space systems support a variety of functions, such as communications, tactical warning and attack assessment, arms control verification, weather, and space defense. This functional support, coupled with the global access permitted by satellites and the efficiency and effectiveness of their use -- both in terms of mission and cost -- reflect the primary reason for our space activities.

Our objectives in space include:

-- Providing an expendable launch vehicle to complement the shuttle for assured access to space;

-- Improving the reliability, maintainability, and supportability of our space assets;

-- Achieving an operational antisatellite capability compatible with the President's pledge to seek the strictest possible ASAT agreement, which is both verifiable and in the national security interests; and

-- Continuing to exploit the unique attributes of the space shuttle as they relate to military applications in space.

We are now deploying military payloads on the shuttle using the inertial upper stage (IUS) and are proceeding with our plans for the first Vandenberg shuttle mission in July 1986. We have initiated a Complementary Expendable Launch Vehicle (CELV) program with an initial operational capability (IOC) of 1989, which will utilize a TITAN 34D7 to complement the shuttle for critical national security payloads. We are also implementing a program that will use refurbished TITAN ICBMs as space launch vehicles for small DoD payloads requiring unique orbits and launch on-demand capability.

At Vandenberg Air Force Base the Shuttle Launch Complex was officially dedicated and declared operational this past October. Work on that part of the Consolidated Space Operations Center (CSOC) facilities which will augment existing satellite command and control capabilities, is essentially complete. We expect to conduct initial military satellite control operations at the CSOC in late 1986.

On September 23, 1985 the United States Space Command was activated. This command will better serve U.S. interests and the needs of our allies worldwide by centralizing operational responsibilities for effective use of military space systems.

Space related research and technology is ongoing to ensure that we are not technologically surprised by our adversaries, to advance our own capabilities for getting to and operating in space, and to improve the survivability of future space systems. We have undertaken with the National Aeronautics and Space Administration (NASA) a major study to identify the required technologies and supporting elements of a second generation space transportation system. This effort will investigate not only advanced propulsion concepts such as scramjets, but will also address the ground operations aspect of space launch with a goal of significantly reducing current launch costs.

3. Chemical Deterrence

a. Introduction

In responding to the threat of chemical warfare, we are primarily concerned with deterring the use of chemical weapons by any potential enemy. With regard to chemical warfare, we stand by our "no first use" commitment. Further, in accordance with our own policy and international treaty obligations, we will not possess biological or toxin weapons.

Our comprehensive approach to preventing chemical warfare includes three mutually reinforcing elements. We are pursuing arms control to eliminate the threat of chemical warfare by obtaining a complete, verifiable ban on the development, production, stockpiling, and transfer of chemical weapons. We are providing defensive equipment to our forces to protect them from the effects of the use of chemical weapons by others. And we are seeking to maintain a chemical retaliatory stockpile sufficient to negate any advantage an adversary might perceive in initiating the use of such weapons against us.

At the Conference on Disarmament in Geneva, the United States leads the effort to negotiate a complete, verifiable ban on chemical weapons. In 1984, the Vice President presented to the conference a draft proposal for the total prohibition of chemical weapons. The proposed treaty is a bold U.S. initiative forging new ground in the critical areas of verification and compliance. To establish confidence in the proposed treaty, the United States is offering to open its military, government-owned, and government-controlled facilities to unrestricted inspection. We are asking other nations to do the same. We realize that such a verification measure is unprecedented, but the risks of the status quo or of an unverifiable treaty are so severe that they far outweigh the risks of allowing international inspection teams into our sensitive facilities.

Last year, with our major initiative still on the table, progress in Geneva was more procedural than substantive. Nevertheless, our negotiators were able to achieve a procedural breakthrough in gaining agreement on a "rolling" treaty text that carries over from one negotiating session to the next. Even so, after many years of effort and 16 years of unilateral U.S. restraint in chemical weapons production, a ban remains elusive. Soviet unwillingness to address seriously the crucial issues of verification and compliance remains the major obstacle to progress.

Chemical weapons exert their greatest impact on the course of battle when there is an imbalance in chemical capabilities between the two sides. The Soviet Union possesses a considerable advantage in chemical warfare capabilities, which could be a decisive factor in nonnuclear conflicts. Working or fighting in protective gear -- the mask, hood, special suit, gloves, and boots -- can be so debilitating that the protective measures themselves can be damaging to military operations. The problems faced by an individual -- heat stress, restricted movement, impaired vision, and limited communications -- are compounded when people must work or fight as a unit. Tasks that are demanding under "normal" battlefield circumstances -- repairing runways and other facilities, rescuing and treating casualties, flying aircraft, and defending against armored attacks -- become much more difficult in a chemically contaminated environment.

The lack of an effective U.S. chemical retaliatory capability could provide the Soviets with a powerful incentive to use chemical weapons to overcome the considerable conventional force improvements we and our NATO allies have achieved over the last five years. The hundreds of billions of dollars we have invested in improving our ability to turn back a Soviet conventional attack would be at risk in the absence of a credible chemical warfare deterrent. Even more important, in the face of such a potential Soviet military advantage, we might have no choice but to turn to nuclear weapons to deny the Soviets their objective. This is precisely the choice we want to avoid. We want to decrease rather than increase our reliance on nuclear weapons to deter conflict.

Outside the NATO area, the so called "nuclear umbrella" is even less credible as a deterrent to chemical warfare. The proliferation of chemical weapons, as shown by the Iran-Iraq war, increases the likelihood that U.S. forces could encounter chemical warfare in many areas of the world where we have vital interests. With as many as 16 nations now credited with possession of chemical weapons, our forces must be ready to deter the use of chemical weapons in virtually every operational circumstance.

Approval of a program to modernize our aging chemical stockpile with safer and more effective binary chemical munitions has at last put us in a position to redress the dangerous disparity outlined above.

Realization of a fully modernized retaliatory stockpile is still several years away, but some results of our effort are already visible. As early as last spring, our delegation to the Conference on Disarmament reported that the Soviets had visibly shifted from rhetorical posturing to more intensive negotiation as the legislative process moved binary chemical modernization nearer to reality. When congressional support for chemical modernization was initially recognized by the Soviets, participation in the negotiations became clearly in their interest.

It is now as important as ever that we continue to demonstrate the resolve embodied in this critical national security decision. With production of the short-range component of our modernized chemical deterrent on the horizon, we look forward to completion of the facilities for production of the long-range component, the BIGEYE bomb. These two systems along with the mid-range binary warhead for the Multiple Launch Rocket System (MLRS), still in research and development, link together to form the retaliatory portion of a credible deterrent to anyone who would consider chemical attacks against U.S. Armed Forces or those of our allies.

For an effective and stable deterrence, we have no need to match the size and scope of either the Soviet chemical arsenal or their protection capabilities. We do, however, require an adequate chemical defense and a modest, but effective, chemical retaliatory capability. Most of the resources in our program are devoted to improving protective capabilities -- suits, detectors, shelters, decontamination equipment, and antidotes. However, all foreseeable effective chemical protective equipment and procedures will continue to hamper individual and unit effectiveness. Therefore, improving our protective posture will not by itself provide an adequate deterrent, since the Soviets and others would enjoy a significant and perhaps decisive military advantage if they could force us to operate in protective equipment while their troops remain relatively unencumbered. To possess an effective deterrent, we must maintain a retaliatory capability sufficient to assure that the Soviets would also have to operate in a protective posture and might, therefore, decide against using chemical weapons.

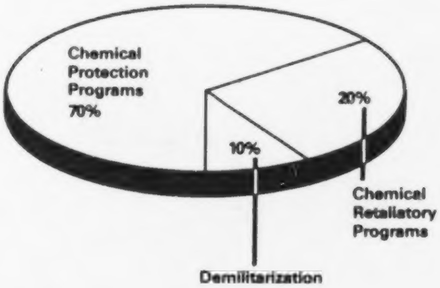
In addition to pursuing a chemical arms ban and reestablishing a chemical deterrent, our program includes plans for the disposal of obsolete and unusable stocks of chemical agents and munitions.

b. FY 1987-91 Programs

(1) Chemical Warfare Protection

As in previous years, our chemical protective program, comprises more than 70 percent of the FY 1987-91 chemical funding (see Chart III.G.3.1). We will continue to improve the capability of our forces to operate in a chemical warfare environment and reduce the degradation in effectiveness imposed by chemical protective equipment and procedures. Our major emphasis will be to develop and field improved protective equipment and supplies, including medical items. The program has placed additional emphasis on sustainability under chemical warfare conditions with additional funds programmed for collective protection in the form of vehicular, transportable, and fixed protection systems. Training, exercises, and doctrine remain key components of the chemical protective program.

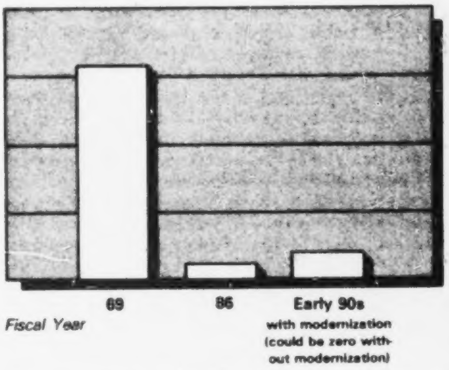
Chart III.G.3.1
FY 1987-91 Funding for Chemical Programs



(2) Chemical Retaliatory Capability

A chemical retaliatory capability, in conjunction with a strong protective posture, is essential to ensuring that the Soviets have no incentive to use chemical weapons against us or our allies. Our binary chemical modernization program provides the means to stop the substantial decline in the capabilities of our chemical stockpile (see Chart III.G.3.2). This decline has been due primarily to the phasing out of delivery systems such as the Honest John rocket, the 105mm howitzer, and obsolete rocket launchers.

Chart III.G.3.2
Useable Chemical Weapons Stockpiles



Our proposed program will continue maintenance efforts to preserve the serviceability of the militarily useful portions of the existing stockpile until adequate numbers of binary munitions are available. However, maintenance cannot halt or reverse internal deterioration of the chemical agent fill, nor can it provide an effective deep-target capability in the absence of appropriate weapons, or ease the logistical burdens associated with the current, lethal chemical munitions. Therefore, modernization of the stockpile is urgently required. Initial procurement of binary chemical artillery projectiles and additional facilities to increase the production rate of both the artillery munitions and the BIGEYE bomb represent about 20 percent of our FY 1987-91 program.

(3) Demilitarization

About 10 percent of our chemical program funds will be used to dispose of chemical munitions. Most of these funds will be used for the disposal of those chemical munitions that could pose safety problems. In conjunction with production of binary munitions, we are proceeding with technology development and planning for the accelerated disposal of the entire unitary chemical stockpile. Construction of facilities for the disposal of the highly flammable agent BZ at Pine Bluff Arsenal is nearing completion and construction of facilities at Johnston Island has begun.

c. Conclusion

Improving our chemical deterrent capability is necessary if we are to eliminate Soviet incentives to use chemical weapons and to provide an inducement for them to join in a comprehensive, verifiable chemical weapons ban. Both the protective and retaliatory components of the program are essential. Our binary chemical modernization program provides the means of correcting the current imbalance, which invites the

Soviets to use chemical weaponry and could give them a decisive edge in conventional conflict. Modernization of both program components is absolutely essential in support of international efforts to achieve what we and most of the world desire -- an end to chemical warfare.

4. Test and Evaluation

a. Introduction

Adequate and realistic test and evaluation (T&E) forms the basis for procurement decisions throughout the Armed Services. While the primary focus has been to enhance the testing of major weapons systems, numerous other key activities have been ongoing to improve the entire test and evaluation process within the context of acquisition management. The Test and Evaluation Policy Directive is being reissued and will define more stringent management policies in line with DoD's emphasis on operational test and evaluation (OT&E) as well as place more emphasis on up-front development and qualification testing. Initiatives to enhance the overall quality of T&E methodology and resources in DoD and to develop advanced threat systems have also moved forward under the leadership of the Director, Defense Test and Evaluation (DDT&E) and the Director, Operational Test and Evaluation (DOT&E). Simultaneously, both offices have taken steps to improve the realism and effectiveness of operational testing. The adoption of several new NATO-produced foreign systems sponsored by the Foreign Weapons Evaluation Program supports the congressional and DoD initiatives to induce and encourage more allied participation and support.

b. Enhancing our Defense Systems Test Capabilities

The tri-Service development program established in 1984 to develop threat radar simulators has created a data base for use in simulating the latest, most capable threat air defense systems. An integrated program is consolidating scientific and technical intelligence, surrogate testing, and simulator development. Inventories and shortfalls have been cataloged and requirements for additional threat simulators are being identified.

A supersonic low-altitude aerial target is being developed to replicate the high-speed, low-altitude dash threat of antiship missiles. A new subscale, subsonic target will also replace older, costlier systems and provide testing for counterair systems by 1989. A new Army helicopter aerial target, designed to test battlefield air defense systems, is now under development and is expected to be fielded by 1987.

A two volume Software Test and Evaluation Manual has been issued for use throughout DoD and defense industry. One of several efforts in an ongoing program aimed at improving the test and evaluation of major systems through improved acquisition management and risk reduction procedures, the manual contains important implementing tools that will be applied in support of existing and planned policy for the test and evaluation of software-intensive systems.

Modernization of our test facilities and resources is continuing with such programs as the Navy's Extended Area Test System at the Pacific Missile Test Center and the Air Force's Aeropropulsion Systems Test Facility (ASTF) scheduled to reach operational capability in 1986. The foundation for a new generation of Time Space Position Instrumentation (TSPI) systems was established when the tri-Service GPS/TSPI program entered full-scale development in 1986.

c. Operational Test and Evaluation Activities

During the past year, the activity level of the office of the Director, Operational Test and Evaluation continued to increase significantly. The office submitted its second annual report to the Congress and vigorously pursued a broad range of operational test and evaluation oversight responsibilities. The most visible of these was the assessment of the operational effectiveness and suitability of the Army's Division Air Defense (DIVAD) gun. Visits were made to a number of test organizations and various test centers. Observers were present at numerous program tests, including those of DIVAD, CH-47D, Landing Craft Air Cushioned Vehicle (LCAC), Tomahawk, Maverick, and LANTIRN. More than 20 programs were reviewed to determine the adequacy of their operational test plans, including the Army helicopter improvement program, the T-46A Next Generation Trainer, NAVSTAR GPS User Equipment, the Navy Close-in Weapon System, the DIVAD gun, the Joint Surveillance and Target Attack Radar System (JSTARS), and the SSN-21 attack submarine program. Other initiatives undertaken include: the establishment of a regular dialogue with the commanders of the Services' independent operational test and evaluation organization and, through policy memorandums and discussions with the Service secretaries, new emphasis on the tenets of operational test and evaluation; early planning and participation of operational test and evaluation organizations in acquisition programs; independent management and conduct of operational testing; and periodic reporting and reviewing of operational test results. More details on operational test and evaluation activities will be included in the DOT&E's FY 1987 Annual Report to the Congress.

d. Joint Test and Evaluation (JT&E) Programs

Five ongoing tests managed by the DDT&E will examine the capability of developmental and deployed systems to perform their intended missions in a joint environment. These tests include evaluation of command, control, and communications countermeasures; identification of friend, foe, or neutral systems; forward area air defense capabilities; electro-optical guided weapons countermeasures and counter-countermeasures; and live munitions effects on foreign and domestic armor and aircraft. The Director, Operational Test and Evaluation retains management responsibility for the Chemical Warfare Joint Test, currently examining chemical warfare doctrine, tactics, and procedures and reviewing various joint operational test nominations for possible new starts in FY 1986 and FY 1987.

e. International Test and Evaluation Initiatives

Under the provisions of an international T&E agreement concluded with Canada, the Air Force successfully completed two captive carry flights (one over Canadian territory) and two free flight tests of the air-launched cruise missile (ALCM) in 1985. Operational test flights will continue this winter along with testing of the Navy F/A-18 and AV-8B aircraft. The Canadian-U.S. agreement affords DoD a unique opportunity to test weapons systems in realistic battlefield conditions and geophysical environments replicating those in Europe and Eurasia. We are also formulating cooperative agreements with France, the United Kingdom, Israel, India, and the Peoples' Republic of China to assist them in the long-term improvement and modernization of their testing capabilities and to accept each other's test data.

The Foreign Weapons Evaluation Program has resulted in 22 items of equipment being selected for the U.S. inventory with a procurement value of over $1.5 billion. By capitalizing on the research and development efforts of our allies, we have been able to obtain $25 of procurement value for every test dollar invested compared to a return of $3.20 in procurement value for every RDT&E dollar invested in domestic programs. This successful program, with its added features of increased interoperability and standardization, continues to enhance the "two way street" of international cooperation and provides an added incentive to our NATO allies to contribute more to the alliance.

5. Technology Security and Export Control

a. The Growing Soviet Threat to the West's Technological Lead

Technological superiority is a key element in the West's efforts to maintain a stable deterrence, thereby preserving the collective security of the free world today. U.S. policy seeks to offset the Soviets' numerical advantage with our strong suit -- superior high technology. We are working to maintain technological superiority by strengthening our research and development base and by restricting Soviet access to our militarily critical technology.

When this Administration came into office in 1981, we began a government-wide program to control what had become a massive flow of Western technology to the Soviet bloc. A decade of naivete and inattention to the importance of technology to our national security had resulted in systematic Soviet-bloc exploitation of Western technology solely for the benefit of its military machine. Only recently have we been able to make public the full extent of the Soviet acquisition effort.

The Soviet program is two-fold. First, they acquire technical information and goods to exploit and use in their military research and development programs in order to improve their weapons systems. Second, they acquire Western equipment, primarily microelectronics and test equipment, to use directly in their backward military factories in an effort to make them more efficient. Many of the acquisitions have no apparent military value at first glance; however, a study of the Soviet economy makes it clear that any technology or piece of hardware that can benefit the military will be used to that end. To the extent that we allow this to happen, we are subsidizing the Soviets' military expansion.

The West currently enjoys several years' lead-time over the Soviet Union in most of the militarily critical technologies, although successful Soviet acquisitions over the past decade have eroded many of those margins of safety. Our initiatives are designed to see that this trend does not continue.

b. DoD Objectives and Initiatives

As part of a government-wide effort to control the flow of militarily significant Western technology to the Soviet bloc, DoD undertook a series of domestic and international initiatives beginning in 1981. There is clear evidence now that our programs have had a marked effect on the Soviet acquisition of Western know-how.

(1) Domestic

Improvement of the export control function is the cornerstone of the domestic technology security program. While DoD does not lead in the administration of the Export Administration Act nor of the Arms

Export Control Act, our national security mandate makes us a key player in decisions made under these two laws. Since 1981 we have taken several steps to make the export licensing process less burdensome on the exporting community while making it more effective in safeguarding our technology.

In January 1984, many of the improvements to the DoD system of processing export license applications were institutionalized with the adoption of DoD Directive 2040.2, "International Transfers of Technology, Goods, Services, and Munitions." The directive clarified the responsibilities for export license processing and related functions within DoD and set the stage for the adoption of DoD Directive 5105.51 in May 1985, establishing the Defense Technology Security Administration (DTSA). A DoD field activity, DTSA places all DoD personnel in the export license application process in the same chain of command for the first time. This and other management initiatives have improved efficiency in license application processing. Not only does the business community benefit from a more expeditious review of its proposed exports, the national security is well-served by licensing decisions made on the basis of licensing history, reliable intelligence, solid technical assessments, and well-thought-out policy positions.

Another domestic initiative involves the business community. The effectiveness of government technology security efforts rests heavily on the support of the business community in the form of voluntary compliance. Through a systematic program of industry briefings and participation in many of the vital issues related to technology security, awareness of the extent and threat of the Soviet acquisition effort is greater than ever before.

The Militarily Critical Technologies List (MCTL), first published in 1980, continues to be used by export license officials as a reference guide detailing potential military applications of a large number of technologies. The technologies and commodities identified in the MCTL primarily contribute to the development, production, or utilization of items controlled for national security purposes or of goods that would convey information concerning these activities.

The MCTL and associated detailed documentation of list items provide guidance within DoD for the review of those license applications that involve the transfer of know-how to Warsaw Pact countries or to potential nuclear-weapon proliferant countries. The application of this list by DoD is commensurate with the Export Administration Regulations and other applicable regulatory requirements.

In October 1984, an unclassified version of the list was published for the first time enabling the business community to see clearly what technology areas DoD has identified as militarily critical. This will also aid businesses in developing and maintaining their own technology security programs.

Finally, in November 1984, DoD issued its implementation of § 1217 of Public Law 98-94 that, for the first time, allows the secretary of defense to withhold from public disclosure any technical data with military or space application if such data may not be exported lawfully without an approval, authorization, or license under the export control laws. DoD-wide implementation of this authority is progressing, and it is anticipated that the department will be able to provide for greater sharing of its export-controlled technical data within its industrial community while retaining the protection for such data afforded by the export control laws. This is possible because the system established for dissemination of export-controlled DoD technical data is designed to keep such data out of the public domain while at the same time making it available to those who have a legitimate need for it. The result will be a further limitation on the ability of adversary nations to acquire advanced U.S. technology that is in the military domain.

(2) International

(a) COCOM

The effectiveness of the technology security program in the United States is inseparable from multilateral efforts with the same objective. Upon entering office, this Administration committed itself to strengthening the existing multilateral export control system known as COCOM, or the Coordinating Committee. COCOM, based in Paris, is the only organization through which the NATO nations (except Iceland) and Japan speak with one voice as to the exportability of Western goods and technology to the Warsaw Pact countries and several other destinations. It is much more effective now than it was five years ago, thanks to a persistent U.S.-led effort to make it a credible technology security force. In the fall of 1985, Spain announced that it would join COCOM. This will be the first new member since 1954, when Japan joined at the request of the United States.

We have been successful in the COCOM initiatives begun in 1981, although more remains to be done in this area. First, a successful and exhaustive list review, which began in the fall of 1982, was completed three years later. This review, the most comprehensive in over a decade, resulted in a more realistic appraisal of products and technologies which, if exported to the Soviet bloc, would enhance their military buildup. Literally hundreds of proposals were negotiated among the member countries to add and delete items from the control lists. The most important achievements were the imposition of controls on stand-alone software exports, tighter controls on switching equipment and technology, and a revision of the control parameters on computer hardware. New controls were added on robotics hardware and software, spacecraft, certain advanced technology printed circuit boards and related manufacturing equipment, and advanced aero-engine technologies.

DoD continues to seek a mechanism through which COCOM can benefit from timely information and analyses of technologies whose export may pose significant strategic risks for the Western alliance. We believe that the establishment of a military experts group to work as an advisory body to COCOM would go a long way toward providing a level of expertise, which is currently lacking in this area.

(b) Initiatives with Non-COCOM Countries

Since all technologically advanced countries are not members of COCOM, we have entered into or are negotiating agreements with various governments to establish a COCOM-level of protection of U.S. and indigenous technology within their borders.

This effort is under way within and outside of the European theater as well. It will grow in importance as the United States continues to increase its trade with industrializing countries, particularly in the Far East. Soviet military presence and exertion of influence in this part of the world is growing dramatically, making technology security efforts increasingly important.

c. Conclusion – Outlook for the Future

Clearly it is in our national interest to encourage industry and our research institutions to continue to be innovative and improve upon our rich industrial base. Our technology security programs have been and will continue to be focused on protecting the applied technologies that are incorporated into systems needed to perform our national security missions. Technology security controls are not intended to thwart our traditions of free expression and academic freedom in basic research. Neither are they designed to distance us from our allies and other friendly countries when it is in our national al interest and in the interest of our mutual security to share militarily significant technology.

One of the initiatives of this Administration has been to bring information about the Soviet technology acquisition threat to the forefront in the minds of industry, scientific circles, governments, and the general public in the United States and abroad. We have been extrememly successful in this aspect of the program -- spreading awareness. This is the first step toward meeting the Soviet threat head-on.

DoD's Technology Security Program is one of the most cost-effective means of protecting national security. Our studies have demonstrated that our initiatives have had a marked effect on the ability of the Soviets to use our technology for their military benefit. They have had to spend more rubles on military research and development than would have been the case had our improved controls not been in place. And our own defense budget has reflected a lower level of expenditures than would have been needed had various Western technical capabilities been acquired by the Soviets.

6. Installations

a. Introduction

I have one objective with respect to DoD's annual investment in installations -- to ensure we have excellent installations to accomplish defense missions in peacetime and war. That means excellent facilities for our Servicemembers where they live, work, and recreate. Almost ten percent of the annual DoD budget is invested in installations -- construction, maintenance, and operation of the physical plant. Specific programs include replacement and modernization of obsolete facilities; maintenance and repair of existing facilities; construction of new facilities; improvements to operating efficiency; host nation support programs; management initiatives; and compliance with environmental, safety, and occupational health standards.

b. The Road to Excellent Installations.

The figures in Table III.G.6.1 illustrate the extent to which we have committed funding for facilities from FY 1981 through FY 1987.

To obtain facilities worthy of our Servicemembers, we must control deterioration of existing facilities, stop living off our capital, and at least stay even with the ravages of time. How much do we need to stay even? My goal is to invest at least two percent of our total plant value in construction each year. For FY 1987, that amounts to about 8.4 billion dollars. This investment is large, but it is an investment in the people who work and live on our installations. That investment is repaid through increased morale, discipline, quality soldiers, greater output, and higher readiness.

Table III.G.6.1
Facility Investment
(Constant FY 1987 Dollars in Billions)

	FY 1981	FY 1982	FY 1983	FY 1984	FY 1985	FY 1986	FY 1987
Repair and Maintenance	4.1	4.8	4.5	5.5	4.7	4.5	7.5
Construction	4.7	6.2	5.6	5.8	6.4	6.4	7.6
Operations	21.0	24.7	22.2	24.0	24.0	25.4	26.4

c. Facilities as Force Multipliers

Experience has shown that excellent facilities improve productivity and fighting power. Most facilities are force multipliers in that mission capability is enhanced without increasing the force size. For example, having a properly equipped, well-constructed facility to conduct tank maintenance increases the number of tanks a technician can repair over the number he could repair out in the open exposed to the elements. This increased productivity means more tanks are in combat-ready status, which directly contributes to increased warfighting capability. Similar effects are realized with pier support facilities; hardened command, control, and communications facilities; training ranges; and supply distribution centers. With creative management and involved personnel, excellent facilities can help bring about dramatic results for local commands and for our overall defense posture. However, investing in facilities is only the beginning. We must also manage our resources more efficiently.

d. Managing for Excellence

President Reagan, in his second inaugural address, stated: "Freedom and incentives unleash the drive and entrepreneurial genius that are the core of human progress." The excellent installations approach to management stresses innovations through deregulation, and incentive through competition and recognition. Deregulation has begun at 37 model installations, with each local commander encouraged to try new ways to accomplish the mission. This experiment is developing better ways to operate bases, while eliminating counterproductive regulations and procedures. Most importantly, it is producing better working and living conditions for our people. That improves morale and productivity, thereby getting better value for each defense dollar while attracting and retaining high-quality men and women essential to today's high-technology military Service.

Competition generates the desire and initiative to try harder to be number one. With that in mind, we have instituted the Commander in Chief's Award for Installation Excellence to generate competition among installations. As President Reagan said: "Without competition, there can be no champions, no records broken, no excellence."

e. Overseas Facilities Support

We continue to support our Servicemembers overseas through appropriated and nonappropriated funded construction and multinational funding. A recent agreement with our NATO allies doubles the annual infrastructure funding. Likewise, the Japanese commitment to U.S. facility support rose to an all-time high. Our allies agreed to let us erect U.S.-manufactured houses, providing U.S. companies the opportunity to benefit from the agreement. Our efforts overseas resulted in construction bids being well within budget.

Nonappropriated funds have been used overseas to improve everything from gas stations to recreational complexes to youth centers and open messes. Nonappropriated fund construction projects experienced a dramatic 125 percent increase during the period FY 1982 to FY 1986. This is a clear indication that DoD and the Services are working hard to improve the quality-of-life for our people.

f. Community Enrichment

DoD continues its environmental stewardship through pollution abatement and cleanup of hazardous waste disposal sites. In FY 1986, we plan to spend $248 million for pollution abatement projects and $329 million for environmental restoration. In FY 1987, we have requested $280 million for pollution abatement projects and $340 million for environmental restoration. Increased emphasis on industrial process modifications and recycling waste products seeks to reduce the costs of pollution.

Of the 911 major military installations requiring preliminary assessment for potential cleanup of past disposal sites, 774 have been completed. Of these, 39 installations have been identified as having national priority list sites. Inspections have been completed at all sites. Cleanup has begun at some sites while at others, our engineers are studying the best way to cleanup the wastes.

We will continue our cooperation with the Environmental Protection Agency (EPA) on many endeavors including the Chesapeake Bay Restoration Plan. A study of all 64 DoD facilities that influence the Bay is under way in a massive effort to abate sources of pollution.

Our commitment to being good neighbors and providing excellent installations is reflected by our natural and historical resources management programs. One hundred sixty-three defense installations harbor endangered species that are managed in cooperation with the states and the U.S. Fish and Wildlife Service. Nearly 11 million acres of DoD property are accessible to the public for hunting, fishing, and other outdoor recreation. In FY 1985, DoD increased the state entitlement to 40 percent of the installations' timber sales profits and returned to host states $2.1 million from forest products sales. DoD also continues to exercise stewardship over hundreds of historic sites on the national register.

g. Conclusion

We continue to make giant strides toward our goal of excellent installations. However, there is still much work to be done. The people who work at our installations are constantly finding ways to get more out of each dollar while meeting the needs of our people. We must continue our commitment to excellent installations. By improving the quality-of-life for our people, we directly affect our warfighting capability and provide for a stronger defense.

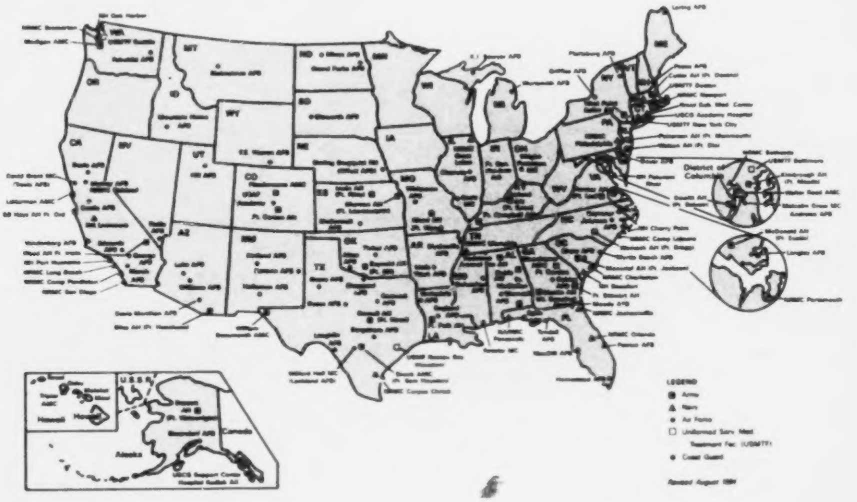
7. Military Health Care

a. Introduction

Too often, in any discussion of our nation's defense, we neglect to mention the essential role played by our military health care system. This system is dedicated to ensuring that in time of war, we are capable of providing life saving care to our fighting forces. In peacetime, we are responsible for providing cost-effective, quality medical care to nearly 10 million beneficiaries. These beneficiaries include active duty and retired members of the Armed Forces and their dependents.

Chart III.G.7.1

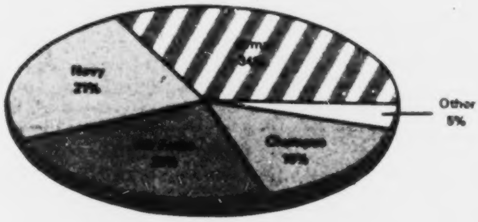
Location of Uniformed Services Hospitals in the United States



These are massive responsibilities, requiring the operation of over 500 medical facilities worldwide including 164 hospitals. Over 170,000 physicians, nurses, dentists, biomedical specialists, administrators, medical corpsmen, and other support personnel are required to staff these medical facilities. In addition to our own health care facilities, we also oversee the operation of the Civilian Health and Medical Program of the Uniformed Services (CHAMPUS). Through the CHAMPUS program, we ensure that authorized health care needed by our beneficiaries, but not available in a military treatment facility, is obtained from the civilian sector. The total annual budget for DoD medical activities is nearly $10 billion.

Chart III.G.7.2.

Allocation of FY 1987 Budget for Medical Activities



b. Medical Readiness

Although the vast majority of our day-to-day patient care responsibilities involve our peacetime mission, the primary obligation of our health care system is to be ready to meet any and all military contingencies. This requires that our military personnel be truly fit for combat and that our military resources -- in terms of both personnel and treatment capabilities -- meet all requirements for lifesaving care, stabilization, evacuation, and follow-on treatment in the event of a conflict.

This medical readiness capability must be our highest priority. When this Administration took office, it was clear that this priority had been neglected. Our health care system was capable of treating only a small portion of the casualties anticipated if this country were involved in a major conventional conflict. The situation has improved. We have emphasized medical readiness and continue to insist that the entire military health care system be geared toward taking care of our wounded in time of war.

We have conducted extensive field reviews of our overall medical readiness capability both in Europe and the Pacific. A special review group thoroughly investigated the areas of medical evacuation, medical command and control, medical communications, and medical planning in the European and Pacific theaters.

These reviews constituted the most extensive analysis of medical readiness ever conducted. As a result, a great deal of attention is being focused on the need to improve cross-service medical readiness planning and increase the resources available to support medical readiness requirements. We are now in the process of making the improvements to our medical readiness capabilities identified in these reviews.

There are several tangible indications of the medical readiness improvements made by this Administration. When President Reagan took office we had no available hospital ship capacity. In response, two

San Clemente-class tankers are presently being converted into floating hospitals with 1,000 beds and 12 operating rooms each.

Another accomplishment stems from our increased efforts to obtain host nation support, not only land and facilities, but also arrangements for interim assistance in hands-on medical care.

The overriding importance of medical readiness was recognized by the Blue Ribbon Panel on Sizing DoD Medical Treatment Facilities. This panel of outside experts in medical facility planning was convened in response to a congressional directive to review the criteria used to size military medical facilities. The panel's final report, completed last summer, recommended that medical readiness be the primary criterion for determining the size and composition of the entire peacetime active duty medical force and of all facilities and workwork in our direct care system. We are implementing this and the other recommendations of the panel.

Recent attention focused on medical readiness needs has also resulted in an accelerated schedule for procuring much-needed deployable medical systems. Each of the Services is expected to have funded its full-complement of deployable medical systems by FY 1990 -- an investment of over $500 million.

c. Quality Assurance

We in DoD are acutely aware of the implications of recent media stories that military medical care is not quality care. This is of great concern to us. We are convinced the overall quality of care in military medicine is equal to, if not better than, medical care in the civilian sector. To ensure this remains true, we have undertaken a broad spectrum of quality assurance measures to improve the quality of health care in all our facilities. These include recent policy decisions to require licensing and credentialling of military health care personnel and restricting off-duty employment of military health care providers.

Also included here are innovative techniques that impact directly upon the quality of our medical system. One example is the recent unprecedented decision to adopt a program of external civilian peer review of military hospitals worldwide. This system of professional review organizations will supplement the existing DoD quality assurance program by providing for an independent review of the quality and appropriateness of care provided in our medical treatment facilities. The creation of this civilian/military partnership for military medical excellence is a giant step forward in restoring credibility and confidence in the quality of military health care.

d. Management Information Systems

A consolidation of the health related data management capabilities into the Defense Medical Systems Support Center (DMSSC) has facilitated managerial decisions and improved the economy and effectiveness of our health care system -- both the direct care and the CHAMPUS operations.

This relatively new organization fulfills information management needs and provides computer capabilities to the processes of eligibility checking, resolving claims, and managing patient information. A major information system effort in the health care arena is the installation of a centralized composite health care system at all major DoD health care facilities.

In addition to providing data management capabilities, these new information systems will facilitate our efforts to improve the quality of health care in the most cost-effective manner. Our expanded information systems capability will also enable us to report patients for aeromedical evacuation, both in peacetime and contingency situations worldwide.

e. Blue Ribbon Panel Report on Hospital Sizing

A recent report expected to have far-reaching implications for improved management of our medical system is the Blue Ribbon Panel on the Sizing of Defense Medical Treatment Facilities. In addition to recommending that medical readiness be the primary criterion for determining the size and composition of the peacetime active duty medical force and facilities, the panel recommendations included:

-- Current estimates of wartime requirements should be further refined and the management information systems now under development should be completed and implemented without delay;

-- The review and selection of military medical construction projects should be centrally consolidated in the Office of the Assistant Secretary of Defense for Health Affairs, with Service inputs;

-- The possibility of establishing long-term contracts with civilian institutions for Graduate Medical Education (GME) should be explored. Additional efficiencies may be achieved by coordinating and possibly consolidating Service GME programs; and

-- Guidelines should be developed to ensure that, where it is cost-effective to do so, the military medical system takes advantage of the medical care capacity of the civilian health care sector.

f. Cost Containment

In view of the ongoing emphasis on obtaining and providing the most cost-effective medical care to our beneficiaries, we continue to seek legislative reforms to permit us to use innovative arrangements to contain costs while providing quality care. For instance, one proposal would permit us to collect reimbursement from private insurance companies for care the military system provides to persons who also have that coverage. Another item on our legislative agenda is a proposal to require that a hospital participate in the CHAMPUS and CHAMPVA programs as a condition of participating in Medicare. This Medicare-CHAMPUS linkage would not only encourage hospitals to accept CHAMPUS and CHAMPVA patients, but is also expected to contain costs.

Another initiative with the potential for significant cost savings is a move to expand our enrollment/eligibility verification process to the Caribbean, European, and Pacific geographic areas. Already, it is estimated that our current eligibility verification process is responsible for avoidance of more than $30 million in unnecessary costs.

In addition to these ongoing cost-containment efforts, we are examining the possibility of establishing a more sensible pattern of health care delivery to provide better access and greater beneficiary satisfaction in the types of services most relevant to wartime medical readiness. The arrangement we envision would also allow our beneficiaries, who use civilian providers, to receive quality care at a reduced cost to the federal government. Precious resources should not be dedicated to building a peacetime in-house system that duplicates and competes with an under-utilized civilian health care system. Rather, we must foster a partnership of excellence with civilian medicine to take advantage of today's highly competitive health care marketplace.

g. Conclusion

Significant improvements have been made in the military health services system during this Administration. Through extensive reviews, we have identified weaknesses in our overall wartime medical capabilities and are implementing policies to correct these deficiencies. Although medical readiness must remain our first priority, we are determined to provide to our ten million beneficiaries comprehensive quality health care, that is equal to, if not better than, medical care in the civilian sector.

Appendix A

Table 1

Department of Defense – BIA by Appropriation[a]
(Dollars in Millions)

	FY 1981	FY 1982	FY 1983	FY 1984	FY 1985	FY 1986[b]	FY 1987
Current Dollars							
Military Personnel	36,909	42,875	45,688	64,866[c]	67,773[c]	67,957[c]	76,814[c]
Retired Pay	13,840	14,986	16,155				
Operation & Maintenance	55,548	62,466	66,540	70,950	77,803	78,697	86,440
Procurement	48,025	64,462	80,355	86,161	96,842	97,282	95,777
Research, Development, Test and Evaluation	16,609	20,060	22,798	26,867	31,327	35,467	41,969
Special Foreign Currency Program	3	3	4	3	9	2	4
Military Construction	3,398	4,916	4,512	4,510	5,517	5,553	6,752
Family Housing & Homeowners Assistance Program	2,004	2,203	2,712	2,669	2,890	2,945	3,398
Revolving & Management Funds	2,677	2,494	1,075	2,774	5,088	2,178	1,203
Trust Funds, Receipts, & Deductions	-649	-714	-365	-650	-447	-690	-756
Total — Direct Program (B/A)	**178,386**	**213,751**	**239,474**	**258,150**	**286,802**	**289,391**	**311,600**
Constant FY 1987 Dollars							
Military Personnel	49,844	51,496	52,752	72,762[c]	73,182[c]	70,627[c]	76,814[c]
Retired Pay	18,026	18,315	18,663				
Operation & Maintenance	64,908	69,315	72,657	76,552	81,231	80,863	86,440
Procurement	62,029	78,115	92,689	96,757	103,876	100,656	95,777
Research, Development, Test and Evaluation	20,974	23,973	26,272	29,887	33,662	36,831	41,969
Special Foreign Currency Program	3	4	4	3	9	2	4
Military Construction	4,240	5,866	5,182	5,004	5,904	5,742	6,752
Family Housing & Homeowners Assistance Program	2,491	2,583	3,093	2,951	3,092	3,052	3,398
Revolving & Management Funds	3,461	2,997	1,242	3,087	5,466	2,267	1,203
Trust Funds, Receipts, & Deductions	-839	-858	-422	-723	-480	-718	-756
Total — Direct Program (B/A)	**225,138**	**251,807**	**272,133**	**286,279**	**306,941**	**299,321**	**311,600**

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[a] Numbers may not add to totals due to rounding.

[b] Lower Budget Authority in the Military Personnel Accounts in FY 1986 reflects the congressional direction to finance $4.5 billion for the military pay raise and retirement accrual costs by transfers from prior year unobligated balances.

[c] Includes Retired Pay Accrual.

Table 2

Department of Defense – BIA by Component[a]
(Dollars in Millions)

	FY 1981	FY 1982	FY 1983	FY 1984	FY 1985	FY 1986[b]	FY 1987
Current Dollars							
Department of the Army	43,252	52,254	57,529	68,664[c]	74,270[c]	74,862[c]	81,528[c]
Department of the Navy	58,011	69,569	81,854	87,365[c]	99,015[c]	98,481[c]	104,503[c]
Department of the Air Force	53,144	64,821	74,074	90,851[c]	99,420[c]	98,330[c]	105,192[c]
Defense Agencies/OSD/JCS	7,483	9,222	9,256	10,746	13,126	15,850	19,486
Defense-wide	16,475	17,885	16,761	524	970	1,867	891
Total — Direct Program (B/A)	**178,385**	**213,751**	**239,474**	**258,150**	**286,802**	**289,391**	**311,600**
Constant FY 1987 Dollars							
Department of the Army	56,630	62,119	66,871	76,270[c]	79,439[c]	77,540[c]	81,528[c]
Department of the Navy	72,749	83,416	92,848	96,456[c]	105,572[c]	101,831[c]	103,633[c]
Department of the Air Force	65,963	73,478	83,457	100,081[c]	105,910[c]	101,62[illegible][c]	103,31[illegible][c]
Defense Agencies/OSD/JCS	9,464	10,997	10,594	11,889	13,977	16,417	19,486
Defense-wide	21,332	21,795	19,363	583	1,043	1,906	891
Total — Direct Program (B/A)	**226,138**	**251,807**	**273,133**	**285,279**	**305,941**	**298,321**	**311,600**

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[a] Numbers may not add to totals due to rounding.

[b] Lower Budget Authority in the Military Personnel Accounts in FY 1986 reflects the congressional direction to finance $4.5 billion for the military pay raise and retirement accrual costs by transfers from prior year unobligated balances.

[c] Includes Retired Pay Accrual.

Table 3
Federal Budget Trends

Fiscal Year	Federal Outlays as a % of GNP	DoD Outlays as a % of Federal Outlays	DoD Outlays as a % of GNP	Non-DoD Outlays as a % of Federal Outlays	Non-DoD Outlays as a % of GNP	DoD Outlays as a % of Net Public Spending[1]
1950	16.0	27.5	4.4	72.5	11.6	18.5
1955	17.6	51.5	9.1	48.5	8.6	36.6
1960	18.2	46.0	8.2	54.0	10.0	30.3
1965	17.5	38.8	6.8	61.2	10.7	25.2
1970	19.8	39.4	7.8	60.6	12.0	25.5
1971	19.9	35.4	7.0	64.6	12.8	22.4
1972	20.0	32.6	6.5	67.4	13.5	20.7
1973	19.1	29.8	5.7	70.2	13.4	19.0
1974	19.0	28.8	5.5	71.2	13.5	18.3
1975	21.8	25.5	5.6	74.5	16.2	16.5
1976	21.9	23.6	5.2	76.4	16.7	15.4
1977	21.1	23.4	4.9	76.6	16.2	15.5
1978	21.1	22.5	4.7	77.5	16.4	15.2
1979	20.5	22.8	4.7	77.2	15.8	15.4
1980	22.2	22.5	5.0	77.5	17.2	15.3
1981	22.7	23.0	5.2	77.0	17.5	15.8
1982	23.7	24.5	5.8	75.5	17.9	16.7
1983	24.3	25.4	6.2	74.6	18.2	17.4
1984	23.1	25.9	6.0	74.1	17.1	17.6
1985	24.0	25.9	6.2	74.1	17.8	17.6
1986	23.3	26.4	6.2	73.6	17.2	17.6
1987	21.8	27.5	6.0	72.5	15.8	17.9

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[1] Federal, state, and local net spending excluding government enterprises (such as the postal service and public utilities) except for any support these activities receive from tax funds.

Table 4
Defense Shares of Economic Aggregates

Fiscal Year	DoD as a Percentage of Public Employment		DoD as a Percentage of National Labor Force		National Income Accounts Percentage of Total Purchases		
	Federal	Federal State & Local	Direct Hire (DoD)	Including Industry	National Defense[1]	Total Federal	State & Local
1965	71.3	29.3	5.0	7.8	7.3	9.8	9.8
1966	73.0	30.6	5.6	9.0	7.5	10.0	10.0
1967	74.1	31.5	6.0	10.0	8.7	11.0	10.4
1968	74.0	31.3	6.1	10.0	9.0	11.4	10.8
1969	73.2	30.1	5.9	9.4	8.5	10.8	11.0
1970	72.3	27.7	5.3	8.1	7.9	10.1	11.4
1971	68.3	24.4	4.6	7.0	7.1	9.3	12.0
1972	66.0	21.9	4.0	6.2	6.6	9.0	12.0
1973	65.0	20.7	3.7	5.8	6.0	8.2	11.8
1974	63.8	19.7	3.5	5.5	5.6	7.7	12.0
1975	62.9	18.7	3.4	5.3	5.7	8.1	12.8
1976	62.5	18.1	3.3	5.0	5.4	7.8	12.7
1977	62.5	17.6	3.2	4.9	5.1	7.6	11.9
1978	61.9	17.3	3.1	4.8	4.9	7.3	11.8
1979	61.1	16.8	2.9	4.8	4.8	7.1	11.5
1980	61.3	16.7	2.8	4.7	5.1	7.5	11.8
1981	62.4	17.0	2.8	4.8	5.4	7.8	11.4
1982	63.2	17.4	2.8	5.0	6.0	8.4	11.5
1983	63.5	17.8	2.9	5.3	6.4	8.7	11.6
1984	63.5	17.8	2.8	5.4	6.2	8.1	11.2
1985	63.7	17.8	2.8	5.5	6.5	8.7	11.5
1986	64.3	17.9	2.8	5.6	6.7	8.9	11.6

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[1] Includes Department of Defense — military, atomic energy defense activities, and other defense-related activities, such as emergency management and maintenance of strategic stockpiles and the Selective Service System.

Appendix B

Manpower Tables

Table 1.

Department of Defense General and Flag Officer Strengths

Actual	General & Flag Officer Strengths	General & Flag Officers Per 10,000 Total Military
1961	1,254	5.0
1962	1,303	4.6
1963	1,292	4.8
1964	1,294	4.8
1965	1,287	4.8
1966	1,320	4.3
1967	1,334	4.0
1968	1,352	3.8
1969	1,336	3.9
1970	1,339	4.4
1971	1,330	4.9
1972	1,324	5.7
1973	1,291	5.7
1974	1,249	5.8
1975	1,198	5.6
1976	1,184	5.7
19TQ	1,174	5.7
1977	1,159	5.6
1978	1,119	5.4
1979	1,119	5.5
1980	1,118	5.4
1981	1,073	5.2
1982	1,073	5.1
1983	1,073	5.1
1984	1,073	5.0
1985	1,073	5.0
Programmed		
1986	1,073	5.0
1987	1,073	4.9

Table 2

Department of Defense Officer Strength — In Thousands

Actual	Officer Strengths*	Enlisted to Officer Ratio
1961	315	6.9
1962	343	7.2
1963	334	7.1
1964	337	7.0
1965	339	6.8
1966	349	7.9
1967	384	7.8
1968	416	7.5
1969	419	7.3
1970	402	6.3
1971	371	6.3
1972	336	5.9
1973	321	6.0
1974	302	6.2
1975	282	6.3
1976	281	6.4
19TQ	279	6.5
1977	275	6.5
1978	273	6.5
1979	273	6.4
1980	276	6.3
1981	283	6.3
1982	290	6.2
1983	299	6.1
1984	303	6.0
1985	309	5.9
Programmed		
1986	311	5.9
1987	313	5.9

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*Includes all active forces officers on extended active duty.

Table 3

Military and Civilian Personnel Strength[a]
(End Fiscal Years — In Thousands)

	Actuals								Programmed		
	FY 1968	FY 1972	FY 1976	FY 1980	FY 1981	FY 1982	FY 1983	FY 1984	FY 1985	FY 1986	FY 1987
Active Component Military											
Army	1,570	811	779	777	781	780	780	780	781	781	781
Navy	765	588	524	517	529	542	558	565	571	581	593
Marine Corps	307	198	192	188	191	192	194	196	198	199	200
Air Force	905	726	585	558	570	583	592	597	602	606	607
Total	**3,547**	**2,322**	**2,081**	**2,040**	**2,071**	**2,097**	**2,123**	**2,138**	**2,151**	**2,167**	**2,181**
Reserve Component Military (Selected Reserve)											
ARNG	389	388	362	367	389	408	417	434	440	450	463
Army Reserve	244	235	196	213	232	257	266	275	292	311	328
Naval Reserve[b]	124	124	97	97	98	105	108	121	130	142	156
MC Reserve	47	41	30	36	37	40	43	41	42	43	44
ANG	75	89	91	96	98	101	102	105	109	111	115
Air Force Reserve	43	48	48	60	62	64	67	70	75	77	81
Total	**922**	**925**	**823**	**869**	**917**	**975**	**1,006**	**1,046**	**1,088**	**1,135**	**1,186**
Direct Hire Civilian											
Army[c]	433	367	329	312	318	321	332	344	359	352	349
Navy	416	342	311	298	310	308	328	332	342	330	330
Air Force[c]	315	280	248	231	233	235	238	240	250	249	250
Defense Agencies	75	60	71	75	79	80	81	85	91	93	98
Total	**1,238**	**1,049**	**959**	**916**	**940**	**945**	**980**	**1,000**	**1,043**	**1,024**	**1,027**

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[a] Numbers may not add to totals due to rounding.

[b] Navy Training and Administration of Reserves (TARs) personnel are counted in the in the Selected Reserve from FY 1980 on. Prior to FY 1980, TAR personnel are are included in the Active Military.

[c] These totals include Army and Air National Guard technicians, who were converted from State to Federal employees in FY 1979. The FY 1968 total has been adjusted to include approximately 3,900 technicians.

Table 4

U.S. Military Personnel in Foreign Areas[a]
(End-Year — In Thousands)

	FY 1968[b]	FY 1972[b]	FY 1976[b]	FY 1979	FY 1980	FY 1981	FY 1982	FY 1983	FY 1984	FY 1985
Germany	214	215	213	239	244	248	256	254	254	247
Other Europe	67	63	61	61	65	64	67	70	73	75
Europe, Afloat	37	25	41	25	22	25	33	18	25	36
South Korea	62	42	39	39	39	38	39	39	41	42
Japan	41	21	45	46	46	46	51	49	46	47
Other Pacific	665	145	27	15	15	15	15	15	16	16
Pacific Afloat (Including Southeast Asia)	80	66	24	22	15	25	33	34	18	20
Miscellaneous Foreign	40	32	8	11	42	39	34	41	38	32
Total	**1,208**	**608**	**460**	**458**	**488**	**502**	**528**	**520**	**511**	**515**

---

[a] Numbers may not add to totals due to rounding.

[b] September 30 data used for consistency.

Appendix C

Force Tables

Table 1

Department of Defense Strategic Forces Highlights

	FY 1980	FY 1984	FY 1985	FY 1986	FY 1987
Strategic Offense					
Land-Based ICBMs[a]					
Titan	52	32	21	8	2
Minuteman	992	990	990	988	963
Peacekeeper	—	—	—	2	27
Strategic Bombers (PAA)[b]					
B-52D	75	—	—	—	—
B-52G/H	241	241	241	241	234
FB-111	59	56	56	56	52
B-1B	—	—	1	18	60
Fleet Ballistic Launchers (SLBMs)[a]					
Polaris	80	—	—	—	—
Poseidon (C-3 and C-4)	368	416	368	352	336
Trident	—	72	120	144	192
Strategic Defense					
Interceptors (PAA/Squadrons)[b]					
Active	127/7	90/5	90/5	76/4	54/3
Air National Guard	165/10	162/10	198/11	198/11	195/11

[a] Number on line

[b] Primary Aircraft Authorized

Table 2

Department of Defense General Purpose Forces Highlights

	FY 1980	FY 1984	FY 1985	FY 1986	FY 1987
Land Forces					
Army Divisions:					
Active	16	16	17	18	18
Reserve	8	8	9	10	10
Marine Corps Divisions:					
Active	3	3	3	3	3
Reserve	1	1	1	1	1
Tactical Air Forces (PAA/Squadrons)[a]					
Air Force Attack/Fighter					
Active	1608/74	1734/77	1758/78	1762/78	1798/80
Reserve	758/36	852/43	864/43	876/43	894/44
Navy Attack/Fighter					
Active	696/60	616/63	734/63	758/65	782/68
Reserve	120/10	75/9	96/9	115/10	101/10
Marine Corps Attack/Fighter					
Active	339/25	256/24	324/25	333/25	334/25
Reserve	84/7	90/8	88/8	94/8	96/8
Naval Forces					
Strategic Forces Ships	48	41	43	44	45
Battle Forces Ships	384	425	435	438	446
Support Forces Ships	41	45	50	54	53
Reserve Forces Ships	6	12	14	18	23
Total Deployable Battle Forces	479	523	542	554	567
Other Reserve Forces Ships	44	24	20	22	21
Other Auxiliaries	8	10	10	10	10
Total Other Forces	52	34	30	32	31

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[a] PAA—Primary Aircraft Authorized

Table 3

Department of Defense Airlift and Sealift Forces Highlights

	FY 1980	FY 1984	FY 1985	FY 1986	FY 1987
Intertheater Airlift (PAA)[a]					
C-5A	70	70	70	70	70
C-5B	—	—	—	5	16
C-141	234	234	234	234	234
KC-10A	—	25	35	48	57
C-17	—	—	—	—	—
Intratheater Airlift (PAA)[a]					
Air Force Active					
C-130	218	218	216	216	216
C-123	64	—	—	—	—
C-7A	48	—	—	—	—
Active Navy and Marine Corps					
Tactical Support	44	44	44	44	44
Reserve Navy and Marine Corps					
Tactical Support	44	44	44	44	43
Sealift					
Ships, Active					
Tankers	21	21	26	26	24
Cargo	23	30	40	43	43
National Defense Reserve Fleet[b]	164	202	214	220	221

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[a] PAA — Primary Aircraft Authorized

[b] Includes commercial dry cargo ships and the Ready Reserve force

Appendix D

ACRONYMS

AAW:	Antiair Warfare
ABM:	Antiballistic Missile
ABS:	Air Base Survivability
AC:	Active Component
ACM:	Advanced Cruise Missile
ACMR:	Air Combat Maneuvering Range
ACS:	Artillery Computer System
ACIP:	Aviation Career Incentive Pay
ADCAP:	Advanced Capability (torpedo)
ADDS:	Army Data Distribution System
ADP:	Automatic Data Processing
ADPA:	American Defense Preparedness Association
AFAP:	Artillery-Fired Atomic Projectile
AFATDS:	Advanced Field Artillery Tactical Data System
AFQT:	Armed Forces Qualification Test
AFR:	Air Force Reserve
AFSATCOM:	Air Force Satellite Communications
AGR:	Active Guard and Reserve
AHIP:	Army Helicopter Improvement Program
AID:	Agency for International Development
AIM:	Air Intercept Missile
ALCM:	Air-Launched Cruise Missile
ALMV:	Air-Launched Miniature Vehicle
AMRAAM:	Advanced Medium-Range Air-to-Air Missile
ANG:	Air National Guard
ANZUS:	Australia-New Zealand-U.S. (treaty)
AOCP:	Aviation Officer Continuation Pay
AOE:	Multipurpose Stores Ship
APOMS	Automated Propeller Optical Measurement System
ASAT:	Antisatellite
ASPJ:	Airborne Self-Protection Jammer
ASROC:	Antisubmarine Rocket
ASW:	Antisubmarine Warfare
ASW/SOW:	ASW Standoff Weapon
ATA:	Advanced Tactical Aircraft
ATACMS:	Army Tactical Missile System
ATB:	Advanced Technology Bomber
ATF:	Advanced Tactical Fighter
ATM:	Antitactical Missile
AUTOVON:	Automatic Voice Network
AWACS:	Airborne Warning and Control System

BA:	Budget Authority
BCS:	Battery Computer System
BEA:	Bureau of Economic Analysis
BFV:	Bradley Fighting Vehicle
BICES:	Battlefield Information Collection and Exploitation System
BMEWS:	Ballistic Missile Early Warning System

C^3:	Command, Control, and Communications
C^3CM:	Command, Control, and Communications Countermeasures
C^3I:	Command, Control, Communications, and Intelligence

CDE:	Conference on Disarmament in Europe
CDIP:	Combined Defense Improvement Projects
CELV:	Complementary Expendable Launch Vehicle
CEM:	Combined-Effects Munitions
CH:	Cargo Helicopter
CHAMPUS:	Civilian Health and Medical Program of the Uniformed Services
CINC:	Commander in Chief
CIWS:	Close-In Weapon System
CNAD:	Conference of National Armaments Directors
COB:	Collocated Operating Base
COCOM:	Coordinating Committee for Multilateral Export Controls
CODES:	Computerized Deployment Execution System
COMSEC:	Communications Security
CONUS:	Continental United States
COR:	Command Operationally Ready
CORE:	Contingency Response Program
CRAF:	Civil Reserve Air Fleet
CS:	Civil Service
CSOC:	Consolidated Space Operations Center
CY:	Calendar Year or Current Year

DAIP:	Defense Acquisition Improvement Program
DARPA:	Defense Advanced Research Projects Agency
DCA:	Dual-Capable Aircraft, Defense Communications Agency
DCAA:	Defense Contract Audit Agency
DCS:	Defense Communications System
DDG:	Guided Missile Destroyer
DDN:	Defense Data Network
DDT&E:	Director, Defense Test and Evaluation
DEERS:	Defense Enrollment Eligibility System
DEIMS:	Defense Economic Impact Modeling System
DEW:	Directed Energy Weapons
DFH:	Deployable Field Headquarters
DIA:	Defense Intelligence Agency
DIPEC:	Defense Industrial Plant Equipment Center
DLA:	Defense Logistics Agency
DLC:	Direct Communications Link
DNA:	Defense Nuclear Agency
DoD:	Department of Defense
DoE:	Department of Energy
DOT&E:	Director, Operational Test and Evaluation
DPA:	Defense Production Act
DPACT:	Defense Policy Advisory Committee on Trade
DPC:	Defense Planning Committee
DRB:	Defense Resources Board
DSB:	Defense Science Board
DSCS:	Defense Satellite Communication System
DSF:	Defense Stock Funds
DSN:	Defense Switched Network
DTSA:	Defense Technology Security Administration

EC:	Electronic Combat
ECM:	Electronic Countermeasures
ECWG:	Emergency Communications Working Group
EJS:	Enhanced JTIDS System
ELF:	Extremely Low Frequency

EMP:	Electromagnetic Pulse
EMPB:	Emergency Mobilization Preparedness Board
EPA:	Environmental Protection Agency
ESF:	Economic Support Fund
EW:	Electronic Warfare

FAASV:	Field Artillery Ammunition Support Vehicle
FEMA:	Federal Emergency Management Agency
FFG:	Guided Missile Frigate
FHE:	Forward Headquarters Element
FLIR:	Forward-Looking Infrared Radar
FMC:	Fully Mission Capable
FMS:	Foreign Military Sales
FMSCR:	Foreign Military Sales Credit (Financing)
FSS:	Fast Sealift Ships
FTS:	Full-Time Support
FY:	Fiscal Year

GAO:	Government Accounting Office
GLCM:	Ground-Launched Cruise Missile
GLLD:	Ground Laser Locator Designator
GM:	General Manager
GME:	Graduate Medical Education
GMF:	Ground Mobile Forces
GNP:	Gross National Product
GPS:	Global Positioning System
GRF:	Guaranty Reserve Fund
GS:	General Schedule
GWEN:	Ground Wave Emergency Network

HARM:	High-Speed Antiradiation Missile
HEMTT:	Heavy Expanded Mobility Tactical Truck
HF:	High Frequency
HLG:	High-Level Group
HMMWV:	High Mobility Multipurpose Wheeled Vehicle
HMO:	Health Maintenance Organization
HNS:	Host Nation Support
HSDG:	High School Diploma Graduates
HTMD:	High Technology Motorized Division

I-S/A AMPE:	Inter-Service Agency Automated Message Processing Exchange
IAMP:	Imagery Acquisition and Management Plan
IAS:	Integrated AUTODIN System
IBP:	Industrial Base Program
ICBM:	Intercontinental Ballistic Missile
IEPG:	Independent European Program Group
IFF:	Identification Friend or Foe
IG:	Inspector General
IIR:	Imaging Infrared
IL:	International List
IMA:	Individual Mobilization Augmentees
IMET:	International Military Education and Training

IMIP: Industrial Modernization Incentives Program
IMP: Internal Management Control
INCA: Intelligence Communications Architecture

INEWS: Integrated Electronic Warfare System
INF: Intermediate-Range Nuclear Forces
ING: Inactive National Guard
IONDS: Integrated Operational Nuclear Detonation System
IR: Infrared
IR&D: Independent Research and Development
IRR: Individual Ready Reserve
IUS: Inertial Upper Stage

JCS: Joint Chiefs of Staff
JCSE: Joint Communications Support Element
JLOTS II: Joint Logistics Over-the-Shore II
JMC: Joint Military Commission
JPMG: Joint Political-Military Group
JSTARS: Joint Surveillance and Target Attack Radar System
JRMB: Joint Requirements and Management Board
JTC^{3}A: Joint Tactical Command, Control, and Communications Agency
JTDE: Joint Technology Demonstrator Engine
JT&E: Joint Test and Evaluation
JTFP: Joint Tactical Fusion Program
JTIDS: Joint Tactical Information Distribution System

KEW: Kinetic Energy Weapons

LAMPS: Light Airborne Multipurpose System
LANTIRN: Low-Altitude Navigation and Targeting Infrared System for Night
LAV: Light Armored Vehicle
LCS: Low-Cost Seeker
LCAC: Landing Craft, Air Cushion
LF: Low Frequency
LHX: Light Helicopter Experimental
LOGMARS: Logistic Applications of Automated Marking and Reading Symbols
LRINF Longer Range Intermediate-Range Nuclear Forces
LVS: Logistics Vehicle System
LVT: Assault Amphibian Vehicle

MAB: Marine Amphibious Brigade
MAF: Marine Amphibious Force
MAP: Military Assistance Program
MAW: Marine Aircraft Wing
MBFR: Mutual and Balanced Force Reductions
MC: Mission Capable, Military Committee
MCC: Military Coordinating Committee
MCE: Modular Control Equipment
MCS: Maneuver Control System
MCTL: Military Critical Technology List

MFO:	Multinational Forces and Observers
MiG:	Mikoyan-Gurevich (aircraft)
MILCON:	Military Construction
Milstar:	Military Strategic and Tactical Relay System
MIP:	Model Installation Program
MIRV:	Multiple Independently-Targetable Reentry Vehicle
MLRS:	Multiple-Launch Rocket System
MMMTF:	Mobilization Materiel Management Task Force
MMP:	Master Mobilization Plan
MMWG:	Military Mobilization Working Group
MNC:	Major NATO Commander
MOA:	Memorandum of Agreement
MOB:	Main Operating Base
MOU:	Memorandum of Understanding
MP:	Military Personnel
MPS:	Maritime Prepositioning Ship
MR:	Marginally Ready
MRT:	Miniature Receiver Terminal
MSE:	Mobile Subscriber Equipment
MSO:	Military Service Obligation
MT:	Military Technician
MTIAC:	Manufacturing Technology Information Analysis Center
MTT:	Mobile Training Team
MULE:	Modular Universal Laser Equipment

NADC:	NATO Air Defense Committee
NAF:	Nonappropriated Fund
NAMSA:	NATO Maintenance and Supply Agency
NATO:	North Atlantic Treaty Organization
Navstar:	Navigation Satellite Timing and Ranging
NCA:	National Command Authorities
NCS:	National Communications System
NCCS:	Naval Command and Control System
NDS:	Nuclear Detonation Detection System
NEACP:	National Emergency Airborne Command Post
NEARTIP:	Near-Term Improvement Program (for MK-46 torpedo)
NFIP:	National Foreign Intelligence Program
NIS:	NATO Identification System
NJCEC:	NATO Joint Communications-Electronic Committee
NMCC:	National Military Command Center
NORAD:	North American Aerospace Defense Command
NPG:	Nuclear Planning Group
NPS:	Nonprior Service
NRF:	Naval Reserve Fleet, Naval Reserve Force
NSA:	National Security Agency
NSDD:	National Security Decision Directive
NSEP:	National Security and Emergency Preparedness
NTPF:	Near-Term Prepositioning Forces
NTU:	New Threat Upgrade

O&M:	Operation and Maintenance
OJCS:	Organization of the Joint Chiefs of Staff
OMB:	Office of Management and Budget
OSD:	Office of the Secretary of Defense
OSIS:	Ocean Surveillance Information System
OTH:	Over-the-Horizon
OTH-B:	Over-the-Horizon Backscatter (radar)

P^3I:	Preplanned Product Improvement
PARCS:	Perimeter Acquisition Radar Attack Characterization System
PAVE PAWS:	Phased-Array Radars
PCS:	Permanent Change of Station
PECI:	Productivity Enhancing Capital Investment
PEP:	Productivity Engineering and Planning, Plant Equipment Package
PGM:	Precision Guided Munitions
PIF:	Productivity Investment Fund
PLRS:	Position, Location, and Reporting System
PLSS:	Precision Location Strike System
POL:	Petroleum, Oil, and Lubricants
POMCUS:	Prepositioning of Materiel Configured to Unit Sets
PRC:	People's Republic of China

QOL:	Quality of Life

R&D:	Research and Development
RAM:	Rolling Airframe Missile
RAMS:	Radar Target Scattering Advanced Measurement System
RC:	Reserve Component
RDSS:	Rapidly Deployable Surveillance System
RDT&E:	Research, Development, Test, and Evaluation
ROK:	Republic of Korea
RPV:	Remotely Piloted Vehicle
RRF:	Ready Reserve Force
RSI:	Rationalization, Standardization and Interoperability
RSP:	Red Switch Project

S&T:	Science and Technology
SA/BA:	Systems Analysis/Battle Management
SAC:	Strategic Air Command
SALT:	Strategic Arms Limitation Treaty
SAM:	Surface-to-Air Missile, Sea Air Mariner
SASC:	Senate Armed Services Committee
SATKA:	Surveillance, Acquisition, Tracking and Kill Assessment
SBIR:	Small Business Innovative Research
SCG:	Special Consultative Group
SCP:	Secure Conferencing Project
SDAF:	Special Defense Acquisition Fund
SDI:	Strategic Defense Initiative
SDIO:	Strategic Defense Initiative Organization
SEAL:	Sea-Air-Land
SE&I:	Systems Engineering and Integration
SF:	Special Forces
SHORAD C^2:	Short-Range Air Defense Command and Control
SINCGARS-V:	Single-Channel Ground and Airborne System, VHF
SLBM:	Submarine-Launched Ballistic Missile
SLC:	Submarine Laser Communications
SLCM:	Sea-Launched Cruise Missile
SLEP:	Service Life Extension Program
SKLT:	Survivability, Lethality, and Key Technologies
SLOC:	Sea Line of Communications
SM:	Standard Missile
SNF:	Short-Range Nuclear Forces

SOF: Special Operations Forces
SR: Substantially Ready
SRAM: Short-Range Attack Missile
SSBN: Ballistic Missile Submarine, Nuclear-powered
SSGN: Cruise Missile Submarine, Nuclear-powered
SSN: Submarine, Nuclear-powered
SSATS: Surface Shp Advanced Sonar
STARS: Software Technology for Adaptable Reliable Systems
START: Strategic Arms Reduction Talks
Su: Sukhoy (aircraft)
SUBACS: Submarine Advanced Combat System
SUBROC: Submarine Rocket
SURTASS: Surveillance Towed-Array Sonar System
SVIP: Secure Voice Improvement Program
SVS: Secure Voice System
SWA: Southwest Asia
SWS: Special Warfare Systems

T&E: Test and Evaluation
TACAMO: Airborne Strategic Communications System
TACS: Auxiliary Crane Ship
TACSI: Tactical Air Control System Improvements
TACTAS: Tactical Towed-Array Sonar
TAOC: Tactical Air Operations Center
TARPS: Tactical Air Reconnaissance Pod System
TCAC: Technical Control and Analysis Center
TDAC: Training Data and Analysis Center
TDRS: Tracking and Data Relay Satellite
TFW: Tactical Fighter Wing
TGSM: Terminally Guided Submunition
TIAP: Theater Intelligence Architecture Program
TIARA: Tactical Intelligence and Related Activities
TOA: Total Obligational Authority
TOW: Tube-Launched Optically-Tracked Wire-Guided (antitank missile)
TRAM: Target Recognition Attack Multisensor
TRI-TAC: Joint Tactical Communications Program
TSPI: Time Space Position Instrumentation
TWG: Technical Working Group

UHF: Ultrahigh Frequency
UNITREP: Unit Status and Identify Report
USCENTCOM: United States Central Command
USCINCCENT: Commander in Chief, United States Central Command
USCINCEUR: United States Commander in Chief, European Command
USCINCLANT: Commander in Chief, United States Atlantic Command
USCINCPAC: Commander in Chief, United States Pacific Command
USCINCSOUTH: United States Commander in Chief, Southern Command
USSR: Union of Soviet Socialist Republics

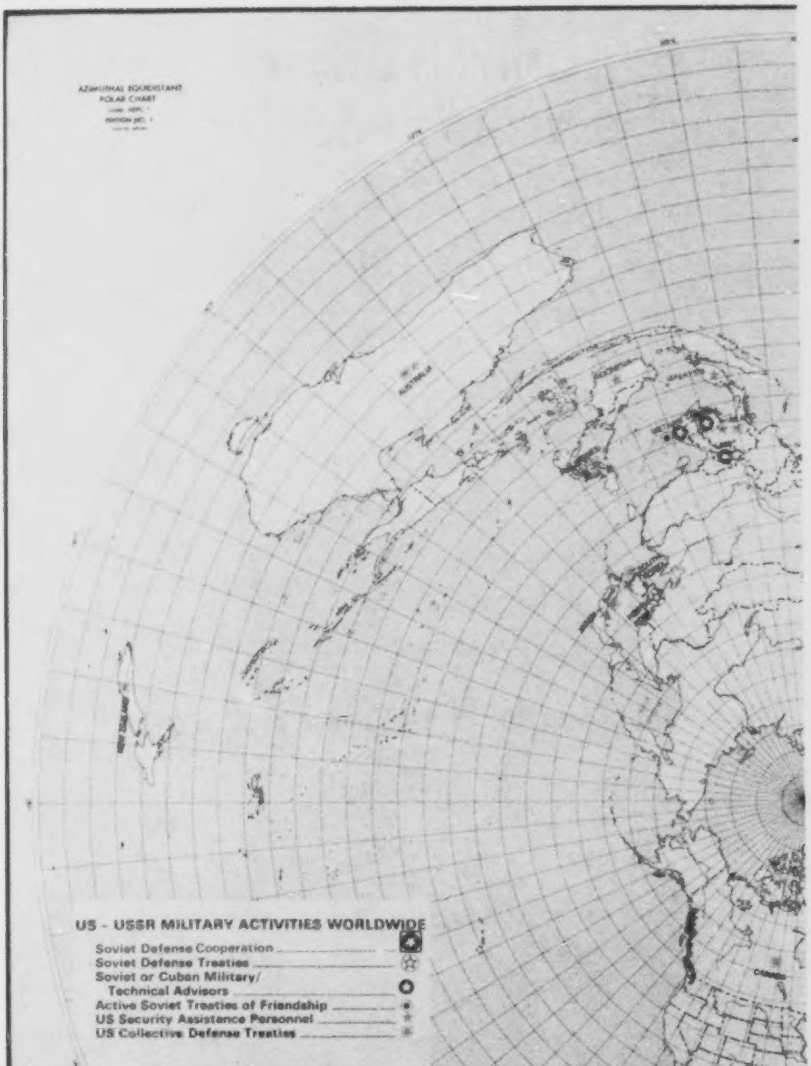
VA: Veterans' Administration
VHA: Variable Housing Allowance
VHF: Very High Frequency
VHSIC: Very High Speed Integrated Circuit
VLA: Vertical Launch ASROC

VLF:	Very Low Frequency
VLS:	Vertical Launch System
VLSI:	Very Large Scale Integration
V/STOL:	Vertical/Short Take-off and Landing
WARMAPS:	Wartime Manpower Planning System
WHNS:	Wartime Host Nation Support
WIS:	WWMCCS Information Systems
WWMCCS:	Worldwide Military Command and Control System

UNITED STATES
MILITARY POSTURE
FOR
FY 1987

Prepared by

THE ORGANIZATION OF THE JOINT CHIEFS OF STAFF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US Security Assistance Personnel
US Collective Defense Treaties
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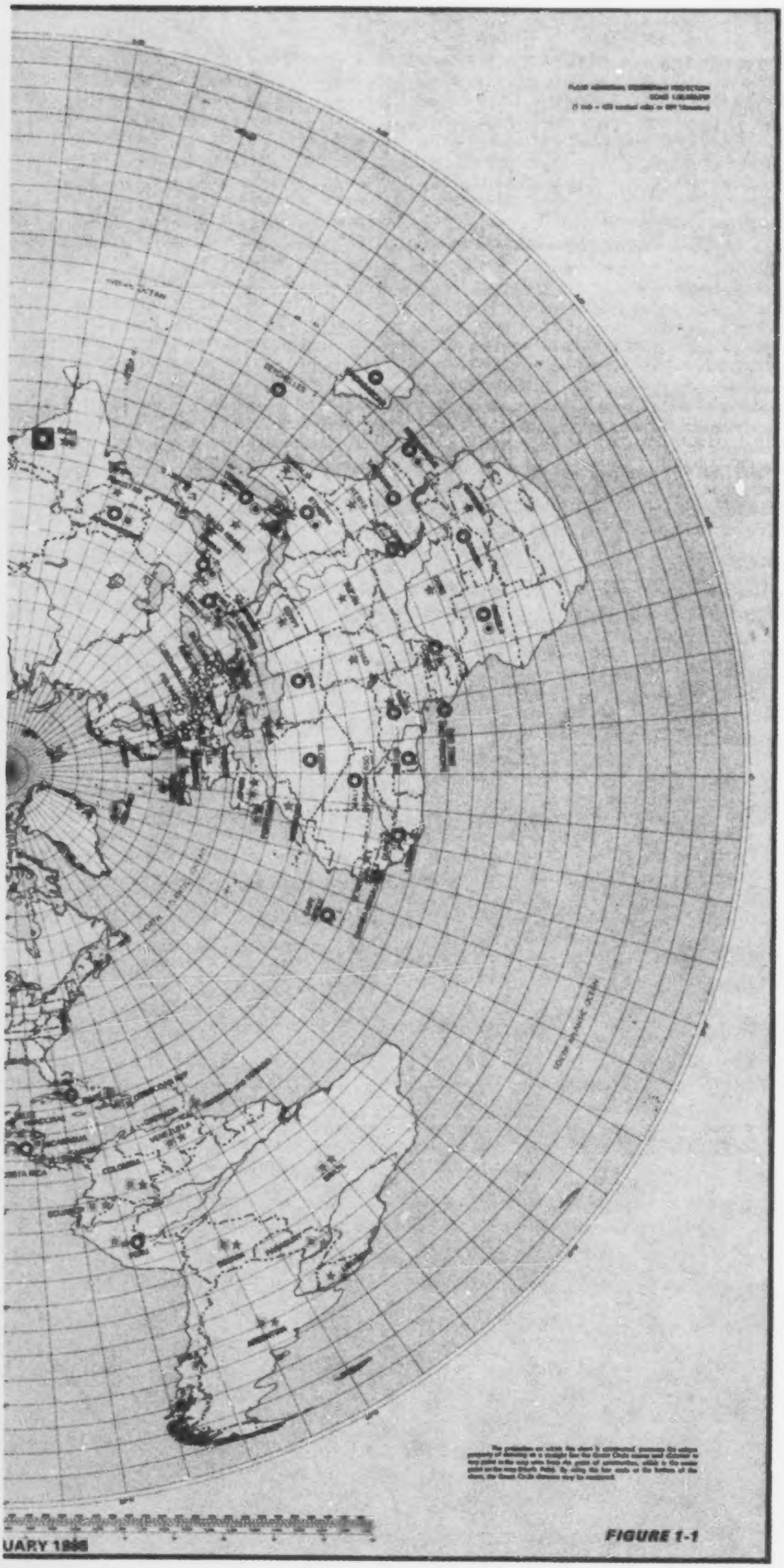

VENEZUELA
COLOMBIA
UARY 1988

FIGURE 1-1

PREFACE

The primary purpose of this statement on the military posture of the United States is to supplement testimony by the Chairman of the Joint Chiefs of Staff and members of the Organization of the Joint Chiefs of Staff at congressional hearings in support of the Fiscal Year 1987 Defense Budget.

Chapter I is an overview that describes the main challenges to US national security, outlines objectives and elements of US military strategy, and highlights continuing efforts to field the best possible armed forces for the protection of US national interests.

Chapter II compares US defense requirements and resource commitments with those of the Soviet Union.

Chapter III assesses the current and projected capability of the US Armed Forces to meet the Soviet nuclear threat.

Chapter IV assesses the current and projected capability of US Armed Forces, in concert with friends and allies, to meet the Soviet conventional military threat. This chapter examines types of forces and their regional applications.

Chapter V addresses other selected topics of interest.

Figures stated in this report are projected for 1 January 1986 based on data available 30 December 1985.

Boundary representations are not necessarily authoritative. The United States does not recognize the incorporation of Estonia, Latvia, and Lithuania into the Soviet Union.

CHAPTER I. SECURITY CHALLENGES AND THE MILITARY POSTURE

INTRODUCTION

The US Armed Forces protect and preserve the United States as a free nation. US forces help assure the physical security of the United States as a democracy and protect US interests abroad. The basic military strategy of the United States is the deterrence of war. A credible deterrent across the full spectrum of conflict requires a strong military posture. The increased military investment of the past few years has resulted in capability growth due to improvements in readiness, sustainability, modernization, and force structure programs.

MILITARY POSTURE AND GLOBAL REALITIES

The United States has global interests and commitments. The security interests of the United States, its allies, and friends continue to be challenged by the sustained growth and complexity of Soviet military power, Eastern bloc and surrogate exploitation of regional conflicts, and instabilities in many areas of the world.

The Soviets continue to modernize their strategic nuclear, theater nuclear, conventional forces, and their capabilities for projecting military power. Together with clients and surrogates, they are attempting to weaken the ties between the United States and its allies and extend their influence in the Third World. Soviet military capabilities further impede the peaceful resolution of Third World problems, and contribute to regional instability in ways that promote wider conflict.

US military strategy seeks to deter attacks against the United States and its allies, limit Soviet capabilities for coercion, and provide the flexibility to respond appropriately to aggression. Therefore, US forces must be capable of meeting regional challenges as well as threats of global dimension. Readiness, sustainability, and sound force dispositions are imperatives of the US military posture.

Global Considerations

US interests are best pursued within a stable, peaceful international community. Armed conflicts, international terrorism, and regional instability adversely affect the United States and its allies with potential global implications. These challenges have led to sophisticated US military forces and the need for collective approaches to security.

The Soviet Union, using military power as its principal tool, continues its efforts to influence international events. Figure I-1 shows the Soviet network of activities that have facilitated the introduction of Soviet equipment and personnel — or surrogate forces — and, ultimately, Soviet influence into various regions of the world.

The continuing Soviet buildup of nuclear and conventional forces has global significance. Soviet military capabilities have put great pressure on US and allied defensive strategies and threatened international stability. The United States and Soviet Union could inflict unprecedented damage on each other by the use of strategic nuclear forces. Nevertheless, the Soviets have continued to develop strategic offensive and defensive capabilities in an effort to reduce the credibility of the US deterrent, to increase the options available to the Soviet leaders, and to diminish the options open to the United States and its allies. The Soviet's heavy dependence on military capabilities, along with their expansionist policies, continues to threaten the North Atlantic Treaty Organization (NATO) and serves to maintain pressure on the Eastern bloc to ensure Warsaw Pact cohesion. In addition, the Soviet Union has broadened the scope of its military activity outside Europe, as shown by its aggression in Afghanistan; extensive maritime operations, especially from facilities at Cam Ranh, Vietnam; and the general buildup of air and naval forces in the Pacific. These activities, along with increased Soviet support and employment of surrogates throughout the underdeveloped world, provide challenges to the West.

The following sections provide an overview of regional considerations that impact on the US military posture. Although the regions differ in many respects, their interrelationship requires that US security efforts in each area be evaluated to determine the potential impact on other regions.

Regional Considerations

Regional instability in underdeveloped areas of the world increases the difficulty of dealing constructively with development problems. Turmoil in these regions also threatens the flow of resources among nations and provides the Soviet Union opportunities to expand its influence at the expense of the Free World. Instability is most prevalent in the Central American-Caribbean region, southern Africa, Southeast Asia, and the area stretching from Libya to Afghanistan. Figure I-2 identifies areas where sustained military hostilities existed in 1985.

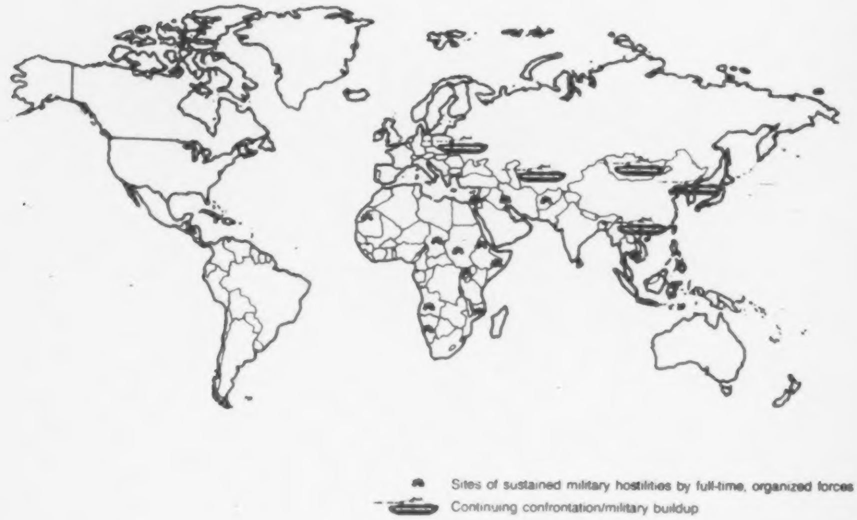
Nations within these regions are confronted by social, economic, and political problems that defy easy solution and often lead to insurgency and intraregional strife. Each of these regions has resources essential to the well-being of numerous nations, and many regions are adjacent to vital lines of communication (LOCs). Terrorism, externally-supported aggression, and possible nuclear proliferation are regional concerns that represent potential threats to US security.

Intraregional conflict poses the risk of involving both neighboring nations and major powers outside the area. The United States must stand ready, with other nations, to deter regional conflicts or limit them should deterrence fail.

Western Europe, NATO, and the Warsaw Pact

The security of Western Europe and the security of the United States are interdependent. The United States is firmly committed to NATO (Figure I-3), and maintains strong forward-deployed forces in Europe and the adjacent seas as evidence of its determination to deter attacks on the Alliance or restore allied territorial integrity in the event of aggression. The security

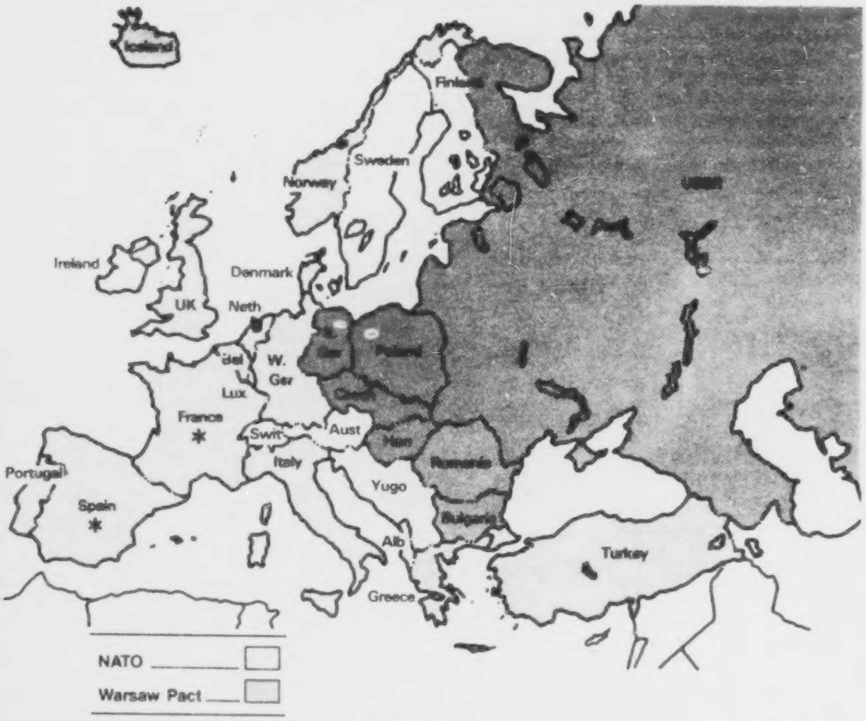
Military Hostilities and Confrontations


● Sites of sustained military hostilities by full-time, organized forces
Continuing confrontation/military buildup

As of 1 January 1986

FIGURE I-2

Western Europe, NATO and the Warsaw Pact


Iceland
Finland
Sweden
Norway
USSR
Ireland
Denmark
UK
Neth
Bel
W. Ger
E. Ger
Poland
Czech
Lux
France
Swit
Aust
Hun
Romania
Portugal
Spain
Italy
Yugo
Bulgaria
Alb
Greece
Turkey
NATO
Warsaw Pact

* Does not participate in integrated military structure

As of 1 January 1986

FIGURE I–3

of NATO depends on the ability of the United States and its allies to continue to deter. Should deterrence fail, they must be capable of defeating Soviet/Warsaw Pact aggression. Accordingly, a full range of conventional and nuclear forces remains essential to deterrence and defense in Western Europe. To ensure a credible conventional defense capability, the Alliance must be able to reinforce forward-deployed forces rapidly, demonstrate that its forces can be sustained, and exploit NATO's advantages in resources, technology, and cohesion. Chapter IV discusses the military balance in Europe.

Middle East and Southwest Asia

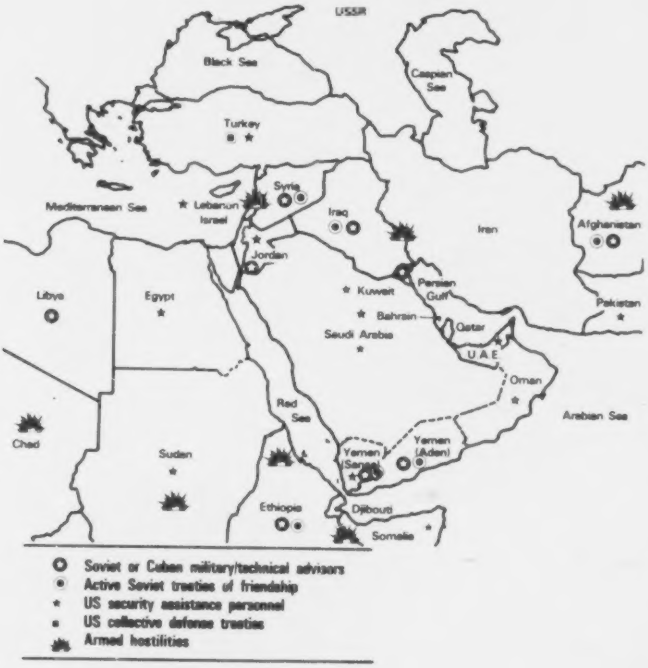
The major US security objectives in the Middle East and Southwest Asia are to counter Soviet moves to expand their influence and ensure continued Western access to oil resources. The United States remains committed to regional stability and the reduction of tensions that carry risks of wider involvement by the major powers. To accomplish these objectives, the United States is involved in diplomatic initiatives, selected security assistance, and multinational peacekeeping efforts (Figure I-4). In recognition of major external threats, the United States is continuing to improve its capability for deploying forces to the region should the need arise. Frequent exercises are conducted to improve this capability. A forward-deployed headquarters element afloat and the presence of naval forces in the area demonstrate US resolve. Chapter IV provides further discussion of the military situation in the region.

Pacific and East Asia

As in Europe, the security of the Pacific contributes directly to the defense of North America. Strong and growing economic ties throughout this area make it essential that the United States promote regional stability, strengthen collective defense capabilities with allies, and encourage defense cooperation with other friendly nations.

Soviet military capabilities in the region continue to grow, providing greater opportunities for the Soviets to exert influence. The Soviets maintain a significant

Middle East and Southwest Asia


USSR
Black Sea
Caspian Sea
Turkey
Syria
Mediterranean Sea
Lebanon
Israel
Iraq
Iran
Afghanistan
Jordan
Libya
Egypt
Kuwait
Persian Gulf
Pakistan
Bahrain
Qatar
Saudi Arabia
U.A.E.
Oman
Arabian Sea
Red Sea
Chad
Sudan
Yemen (Sanaa)
Yemen (Aden)
Ethiopia
Djibouti
Somalia
O Soviet or Cuban military/technical advisors
◉ Active Soviet treaties of friendship
★ US security assistance personnel
■ US collective defense treaties
Armed hostilities

As of 1 January 1986

FIGURE I–4

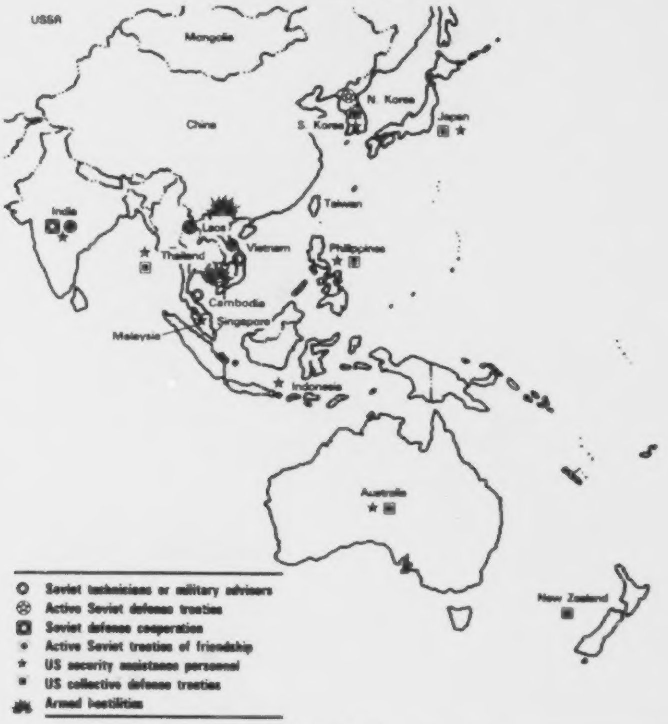
ground force in the region and have expanded their naval presence and increased, as well as qualitatively enhanced, their overall military presence. North Korea and the Socialist Republic of Vietnam, supported by Soviet assistance, remain major sources of instability within the region (Figure I-5). The protection of US and allied interests in the Pacific and East Asian region continues to require forward-deployed air, ground, and naval forces and the ability to reinforce those forces quickly. Chapter IV provides further discussion of the military balance in this region.

Latin America

The security and stability of Latin America remain important US objectives. A considerable portion of US trade passes through the Caribbean and, if NATO is attacked, so would a large percentage of US supplies required for reinforcing NATO Europe (Figure I-6). Because of the proximity of Latin America, events there are important to the United States; instabilities and conflicts in this region could divert US attention and resources from other areas of the world.

The continued Soviet presence in the region, combined with Cuban and Nicaraguan activities, contribute to the spread of insurgency and discord, and compound the endemic social, political, and economic sources of instability already troubling many regional states. The Soviets have enhanced the capabilities of their Cuban client by providing mod-

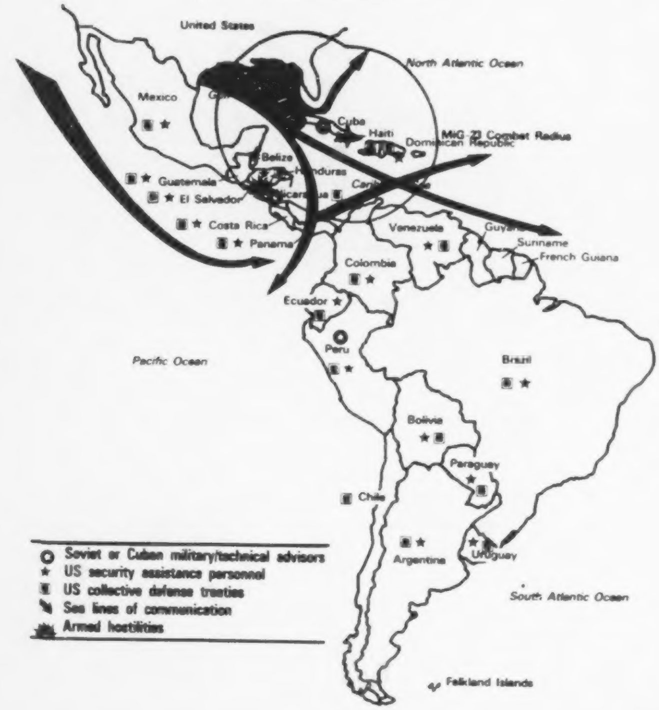
Pacific and East Asia


USSR
Mongolia
China
N. Korea
S. Korea
Japan
Taiwan
India
Laos
Vietnam
Philippines
Thailand
Cambodia
Singapore
Malaysia
Indonesia
Australia
New Zealand
○ Soviet technicians or military advisers
Active Soviet defense treaties
Soviet defense cooperation
• Active Soviet treaties of friendship
★ US security assistance personnel
▪ US collective defense treaties
Armed hostilities

As of 1 January 1986

FIGURE I-5

Latin America


United States
North Atlantic Ocean
Mexico
Cuba
Haiti
Dominican Republic
MiG-23 Combat Radius
Belize
Honduras
Guatemala
El Salvador
Nicaragua
Costa Rica
Panama
Venezuela
Guyana
Suriname
French Guiana
Colombia
Ecuador
Peru
Pacific Ocean
Brazil
Bolivia
Paraguay
Chile
Argentina
Uruguay
South Atlantic Ocean
Falkland Islands
○ Soviet or Cuban military/technical advisors
★ US security assistance personnel
▨ US collective defense treaties
Sea lines of communication
Armed hostilities

As of 1 January 1986

FIGURE I-6

ern and sophisticated military equipment. The combined Cuban and Soviet military assistance provided Nicaragua has enabled that country to become the strongest single military power in Central America. Currently, external support to leftist insurgents in El Salvador and the arms buildup in Nicaragua are the issues most affecting US security interests in Latin America. The Soviet Union is attempting to expand its presence and influence in nations throughout the region by economic and other means.

In view of threats to regional interests, the United States must continue to strengthen its relations with the nations of Latin America on the basis of mutual interests. The United States must demonstrate that it is a reliable security partner by helping friends and allies deter and defeat insurgencies, and by assisting in the development of combined military capabilities that serve collective security objectives. Increased security assistance, intelligence sharing, and close military ties will help create conditions under which nations of the region can work to eliminate the underlying causes of instability. Chapter IV contains a discussion of the military balance in Latin America.

Africa

US security interests in Africa stem from the resources that continent provides Western nations and the transit facilities which might affect US operations in the Mediterranean, Middle East, and Southwest Asia regions. These and other interests are adversely affected by the instability and turmoil in the area, which have made many nations vulnerable to influence by the Soviets and their surrogates (Figure I-7). For instance, Libya's involvement in regional conflicts adds significantly to the difficulties faced by affected states.

Around the Horn of Africa, the presence of Cuban forces and Soviet advisors in Ethiopia aggravates tensions. Internal power struggles in Sudan and Uganda, as well as civil unrest in South Africa, pose additional stability challenges in the region. Elsewhere, the presence of Cuban (35,000 personnel) forces and approximately 1,000 Soviet advisors in a divided Angola continues to be an obstacle to efforts to improve stability in southern Africa. US interests require that security assistance be provided to African friends and allies.

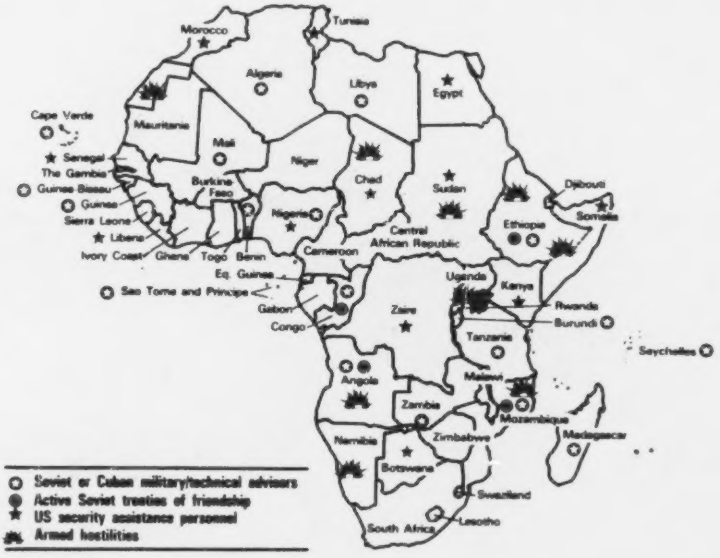
Implications for US Strategy and Forces

Military strategy is designed to meet the challenges to US security interests. Such interrelated factors as US-Soviet relations, relative strengths of major nations, global military balance, arms control agreements, and current regional military situations must be considered in the formulation of strategy and the development of forces to support it. US military strategy and force levels must be adequate to confront a wide range of challenges, from low-intensity conflict to threats involving modern conventional and nuclear forces.

US MILITARY STRATEGY

The security requirements summarized above form the basis for US military strategy to support the more comprehensive national security objectives. The US military strategy is defensive and seeks to deter war while maintaining a secure environment within which the United States, its allies, and friends can pursue le-

Africa


Morocco
Tunisia
Algeria
Libya
Egypt
Cape Verde
Mauritania
Mali
Niger
Senegal
The Gambia
Guinea-Bissau
Guinea
Sierra Leone
Liberia
Ivory Coast
Ghana
Togo
Benin
Burkina Faso
Nigeria
Chad
Sudan
Djibouti
Somalia
Ethiopia
Central African Republic
Cameroon
Eq. Guinea
Sao Tome and Principe
Gabon
Congo
Zaire
Uganda
Kenya
Rwanda
Burundi
Tanzania
Seychelles
Angola
Malawi
Zambia
Mozambique
Madagascar
Zimbabwe
Namibia
Botswana
Swaziland
Lesotho
South Africa
○ Soviet or Cuban military/technical advisors
● Active Soviet treaties of friendship
★ US security assistance personnel
Armed hostilities

As of 1 January 1986

FIGURE I-7

gitimate interests. This strategy of deterrence is rooted in a national commitment to peace and freedom.

Elements of the Strategy

The fundamental elements of US military strategy are nuclear deterrence supported by negotiated arms reductions and the Strategic Defense Initiative (SDI), strong alliances, forward-deployed forces, a strong central reserve, force mobility, freedom of the seas, air, and space, effective command and control, and good intelligence.

Nuclear Deterrence With Arms Reductions

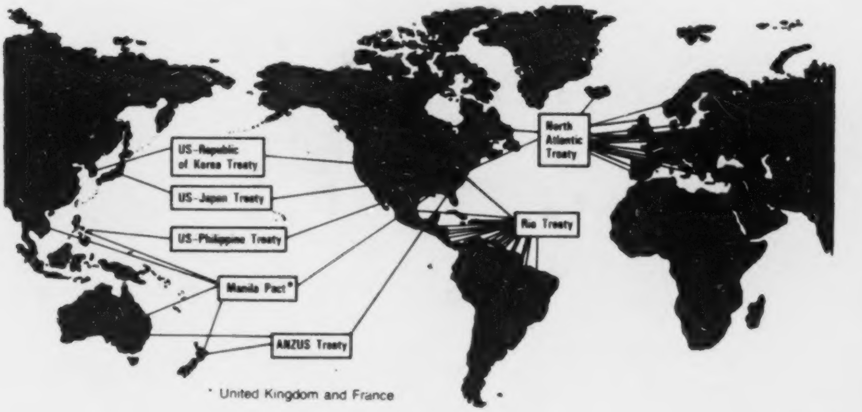
The fundamental objective of US nuclear forces is to remove all incentives for direct attack against the United States and its allies by promising any attacker a devastating outcome. The Soviet Union has continued to challenge the US guarantee of effective retaliation and has threatened US deterrent capabilities by strengthening certain measures of Soviet nuclear strength. To counter growing Soviet nuclear warfighting potential, the United States gives high priority to the modernization of its nuclear forces and the study of means for defending against ballistic missile attack. Equitable and verifiable arms reduction agreements are being pursued in parallel with modernization programs. The goal of the United States is a more stable nuclear balance at lower levels of armament.

Strong Alliances

US military strategy is based on a system of strong alliances (Figure I-8). The shared values and combined economic strength of friendly countries provide a firm basis for effective collective security among the NATO nations and US allies elsewhere. The cohesion of US collective security arrangements requires understanding that interests of the United States and its allies may not always coincide. Nevertheless, US alliances are more reliable than those of the Soviet Union because they are built on voluntary association, shared values, mutual trust, common purpose, and strong commitment.

In this period of challenges to the nuclear balance between the United States and the Soviet Union, conventional military forces have become increasingly important. The Warsaw Pact has fielded large armed forces with modern conventional, chemical, and nonstrategic nuclear weapons. The United States alone does not match these forces in numbers. The allies make a significant contribution to deterrence by

United States Collective Defense Arrangements



* United Kingdom and France

As of 1 January 1986

FIGURE I-8

providing weaponry, well-trained manpower, facilities, and control of key geographical areas, thereby enabling the Free World to meet Soviet challenges.

Forward-Deployed Forces

A key factor in the success of US alliances is the forward deployment of military forces. These forces demonstrate the US commitment to the common defense and serve notice that an attack will be met immediately by US opposition. In peacetime, the American presence among allies reduces the coercive potential of Soviet military threats and facilitates early reinforcement in crisis. In the event deterrence fails, forward-deployed forces ensure a strong combined defense.

Central Reserve

The majority of US nuclear and conventional forces are based in the United States. The readiness and preparedness of these forces to deploy contribute to deterrence of major conflict. These forces provide the capability to reinforce and sustain forward-deployed forces in combat, and help deter or contain conflicts in areas of interest where the US has no permanent military presence.

Force Mobility

In order to project US military power globally, US forces must maintain a high degree of mobility. The successful implementation of US strategy requires highly capable airlift, sealift, and air refueling forces. Additionally, overflight arrangements and access rights to overseas airfields, ports, and staging areas contribute to deployment flexibility and efficiency. The pre-positioning of supplies and equipment in certain areas and host-nation support are also important components of US reinforcement.

Freedom of the Seas, Air, and Space

Freedom of navigation and access to space are inherent elements of US military strategy. Unimpeded use of the seas and aerospace allows support and reinforcement of forward-deployed forces, enables US and allied forces to operate worldwide, and ensures uninterrupted commerce for the nation and its allies.

Freedom to operate in space is a modern military requisite. The United States depends heavily on satellites for early warning of missile attack, weather data, navigation, surveillance, and command and control. Superior space capabilities will be required to ensure uninterrupted US use of key space assets.

Command and Control

Command and control is imperative to the successful employment and most effective use of our military forces. Command and control systems must be as survivable and endurant as the forces they support as these systems provide the essential link between the National Command Authorities (NCA), Joint Chiefs of Staff (JCS), and unified/specified commanders. Survivable facilities and systems that operate effectively during all phases of conflict add to deterrence and are vital should deterrence fail.

Intelligence

US military strategy depends heavily on accurate and timely intelligence for warning and the effective employment of military forces. Such intelligence increases the likelihood that forward-deployed and reinforcing forces will deter conflict or defend successfully, and maximizes the potential of modern weapon systems.

Applying the Strategy

US forces are not available to defend simultaneously against every threat with equal strength. Nonetheless, the United States must make it clear that its interests will be defended and obligations to allies met. US force employment planning considers the fundamental tasks that must be accomplished and the need to retain flexibility to meet other contingencies that threaten US security interests.

Should deterrence fail, US military forces will undertake missions to defeat aggression against the US, its allies and friends, and terminate conflict on favorable terms. US forces would seek to limit the scope, duration, and intensity of any conflict in which they were involved.

Sound military doctrine is essential to the successful implementation of US strategic concepts. Joint doctrine ties together the capabilities of the Services, guiding both the development and employment of forces. Effective joint doctrine helps prevent duplication and gaps in Service capabilities and aids in the translation of plans into execution. Likewise, combined doctrine provides a standardized reference for military operations with our allies, and therefore enhances interoperability and effectiveness.

The US strategy is designed to capitalize on the enduring strengths of the United States — its political and social values, diversified economy, advanced technology, and the will and ingenuity of its people. To succeed, US strategy will continue to require the help of supportive allies and remain adaptable and responsive to a changing world.

PROGRESS MADE

The ability of our nation's military forces to accomplish their warfighting tasks has continued to improve significantly. These enhancements encompass all aspects of military capability: force structure, modernization, readiness, and sustainability efforts.

The force structure within which US military forces are organized continues to change to give the balance needed to maintain the capability to respond at various levels of conflict. Funding has enabled movement toward a 28 division Army that has a better balance of light and heavy forces. The number of ships has increased to meet our expanding requirements and Air Force structure increases provide greater fighter aircraft capabilities. This expanding force structure needs modern equipment to meet the threat. Equipment from the strategic level to the very personal area of ground combat is being modernized and inventories have been increased. Much new equipment is more capable so performance per fighter has increased. Specifics are addressed in subsequent chapters.

Due to production limitations and equipment transition periods, modernization benefits will be distributed over the next several years. Training with evolving joint tactics makes our units more robust and allows fewer forces to protect more. Readiness efforts, on the other hand, have produced steady and measurable improvements all through the period. Mission capable rates of aircraft, the numbers of sorties and aircraft utilization rates, and abilities in strategic warning and attack assessment have all increased. The readiness of US military forces to execute assigned tasks is at a high state.

One important factor that influences preparedness to respond to threats is sustainability. Both ammunition and missile inventories have been increased. Aircraft sortie rates have also improved as a result of increased spare parts. Redundancy of command, control, and communications and increased electromagnetic pulse hardening of strategic time-sensitive sites have enhanced survivability and thus provide sustaining command and control.

The key, however, to mission accomplishment is the men and women who have chosen to serve. The quality of men and women in the US Armed Forces has never been higher.

The combination of good people and effective programs has made US forces more professional, reliable, and capable. The continued support of the Congress and the American people will be critical to maintaining improvements in military preparedness.

PREPARING FOR THE FUTURE

The proposed defense program for fiscal year (FY) 1987, despite reductions because of constraints, will further improve the readiness, sustainability, modernization, and force structure posture of US military forces. However, progress will not be as rapid as desired and emphasis on adequate fiscal resources is essential to ensure that our warfighting capabilities continue to improve.

The United States continues to place a high priority on the modernization of its strategic forces. The

AEGIS CRUISER

aim of this vital effort is to make command and control systems more survivable while retaining and improving all legs of the TRIAD. The development and deployment of the PEACEKEEPER missile, the Small Intercontinental Ballistic Missile (SICBM), the TRIDENT II (D-5) submarine-launched ballistic missile system (SLBM), the B-1B and Advanced Technology Bomber (ATB), the AGM-86B Air-Launched Cruise Missile (ALCM), and the Advanced Cruise Missile (ACM) will help improve the US strategic deterrent. These nuclear weapon modernization programs are essential for deterrence and to enable the United States to enter meaningful arms reduction agreements.

B-1B BOMBER

TRIDENT BALLISTIC MISSILE SUBMARINE

A major effort is under way to address the feasibility and desirability of developing defenses against ballistic missiles. Under the President's SDI, research is being conducted on potential technologies that might provide a defense against ballistic missiles.

In recognition of the increasing role of space in supporting national security interests, the United States has established a unified command for space. The new unified command better serves US interests and the needs of our allies by providing an organizational structure that centralizes operational responsibilities for more effective use of military space systems.

Emphasis on nonstrategic nuclear force modernization continues with the production of modernized field artillery warheads and the fielding of PERSHING II, sea-launched nuclear TOMAHAWK land-attack cruise missiles (TLAM/N), and ground-launched cruise missiles (GLCMs). Improved command, control, and communications will increase the survivability, flexibility, and deterrent capability of deployed nonstrategic nuclear forces.

The modernization of conventional forces is another key objective of the US defense program. Land forces are undergoing organizational changes to improve their flexibility and maximize the effectiveness of recently introduced weapons, such as the ABRAMS tank, BRADLEY fighting vehicle, AH-64

AV-8B HARRIER

B-52 AGM-86B LAUNCH

(APACHE) and UH-60 (BLACKHAWK) helicopters, Multiple Launch Rocket System (MLRS), and PATRIOT and STINGER air defense systems. As a result of organizational improvements, the Army's 17 Active and 9 National Guard divisions have been restructured to 18 Active and 10 National Guard divisions.

The United States continues to build toward a 600-ship Navy with 15 carrier battle groups, 4 battleship battle groups, 100 modernized attack submarines, and expanded amphibious assault and sealift capabilities. Additionally, more capable combat aircraft and modernized munitions are being obtained to build and strengthen an Air Force with an interim goal of 40 tactical fighter wing equivalents.

These programs, together with maritime prepositioning ships (MPS), increased strategic airlift and sealift, and revitalization and modernization of special operations forces, will enhance the readiness posture of US forces and their sustainability. Finally, added attention to cross-service and allied requirements has enhanced the applicability of these improvements to both joint and combined operations.

Good soldiers, sailors, airmen, and marines are essential to successful implementation of the US military strategy. Service manpower programs will continue to aim at recruiting and retaining quality men and women who value service to their nation and have the aptitude, skills, and motivation to operate and maintain modern weapon systems.

The programs initiated to restore and maintain US military strength must be continued. Constant attention and sustained support are required to keep our forces strong. Although the trend in Congress is to reduce defense spending, short-term attempts to economize on military investments, whether in people or equipment, can only lead to higher future costs and a less effective military posture with the attendant increased risk to national security.

MULTIPLE-LAUNCH ROCKET SYSTEM

AH-64 APACHE

CHAPTER II.

STRATEGIC REQUIREMENTS AND RESOURCE COMMITMENTS

INTRODUCTION

US military strategy requires resources to maintain readiness of the forces, modernize for the future, and provide a recognized capability to mobilize additional forces rapidly. The US Armed Forces must, therefore, be supported by an efficient, effective national resource base. This chapter provides an overview of the US and Soviet resource bases that support military requirements.

The heavy Soviet investment in nuclear and conventional forces provides evidence of the high priority Soviet leaders place on military requirements. The United States devotes relatively fewer resources to its military posture, in part because of the defensive nature of the US military strategy and the structural differences in the two economies. The Soviet system of centralized planning has led to an overall weaker economy and a smaller economic base than the United States, but has allowed greater focus to be placed on areas of priority. Despite this smaller economic base, the Soviet Union has decided to direct more peacetime resources to military requirements than does the United States.

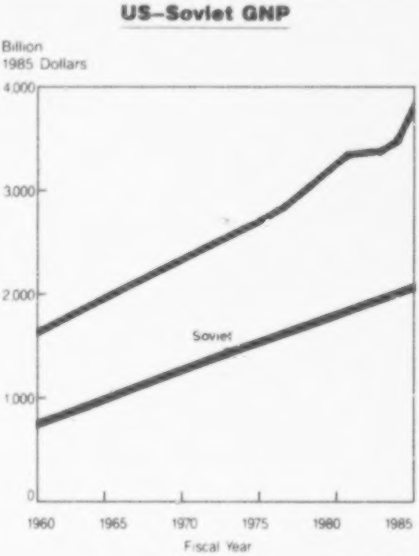
RESOURCES IN SUPPORT OF NATIONAL OBJECTIVES

Overview

A nation's economy must be strong to support its national security objectives effectively. The industrial base must be capable of producing the required military equipment from available materials and be supported by adequate manpower. Further, the industrial base must be responsive to critical wartime needs and able to respond to surge requirements. The necessary raw materials must be available under all conditions. The United States requires a strong technological base to ensure that its forces continue to be equipped with qualitatively superior weapons.

Economic Support

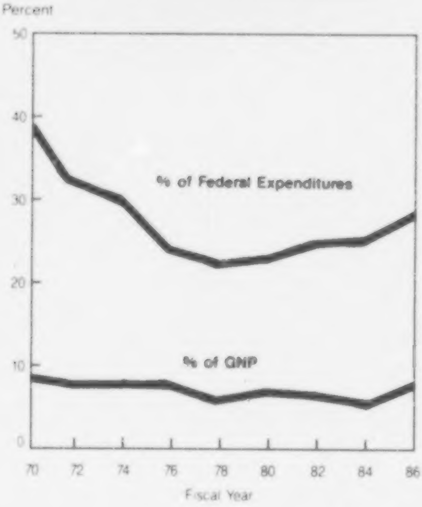
The economic strengths of the United States and the Soviet Union can be compared by examining their gross national products (GNPs). Figure II-1 shows that the US GNP is more than 80 percent higher than that of the Soviet Union. Further, the gap has continued to widen in favor of the United States. Thus, the United States has a greater potential for supporting defense spending.



As of 1 January 1986 *FIGURE II-1*

The Soviet Union has steadily increased its defense expenditures. During the past 10 years, the Soviets have spent more than three times as much as the United States on strategic forces and about 1-1/2 times as much on conventional and nonstrategic nuclear forces. The Soviet inventory of weapons is far larger than that of the United States. Also, the average age of deployed Soviet weapons continues to decrease with the introduction of new and qualitatively improved systems. Although the decline in US defense spending has been reversed, as shown in Figure II-2, strong and sustained support for defense activities will be necessary in light of the Soviet's inventory expansion and continuing high rate of investment.

US Defense Expenditures as a Percentage of GNP and Federal Expenditures



As of 1 January 1986 *FIGURE II-2*

Industrial Base

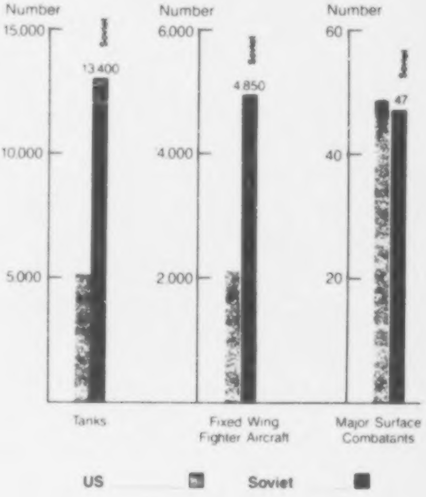
The military potential of nations can be measured, in part, by peacetime production bases and the capability for rapid conversion to wartime needs. The Soviet defense industry is now the world's largest, both in numbers of facilities and output capacity. Figure II-3 shows US and Soviet production of selected weapon systems over a 5-year period. If the full industrial capabilities of both nations were mobilized for military production, the United States initially would be unable to match Soviet industrial production. Over time, however, the United States, because of its much greater industrial base, could surpass Soviet capabilities in terms of both size and output. The timing and degree of emphasis the United States places on mobilization of its industrial base would be critical to the successful outcome of a major conflict with the Soviet Union.

Soviet weapon plants and war-related production facilities are continually active, as old weapon programs are phased out, new ones are begun. As a result, the Soviet arms industry is in a high state of readiness and is capable of rapid wartime expansion. In the United States, however, the increased emphasis of high-technology manufacturing and the growth of service industries, combined with the decline of heavy industry and traditional manufacturing required for arms production, have reduced the capacity to increase military production rapidly during periods of crisis.

US defense planners have taken several steps in the past few years to improve the ability of the US industrial base to support the military strategy. The Services are provided prioritized lists of systems identified by field commanders as most critical to their immediate requirements. Additionally, industrial pre-

US–Soviet Production of Major Weapon Systems

1981–1985



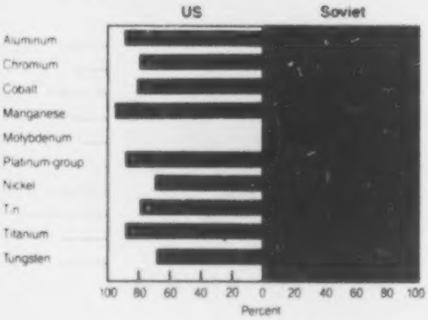
As of 1 January 1986 *FIGURE II-3*

paredness planning is receiving increased attention, and industrial mobilization is being addressed extensively in exercises. Incentive programs are stressing efficient and competitive peacetime production to meet the demands of wartime sustainability. There is a continuing need for investments to ensure that the necessary improvements are made to the US industrial base.

Natural Resources To Support Defense

The ability to mobilize and increase wartime production depends in part on the availability of critical raw materials. These materials must be indigenous to the country, stockpiled, or available over secure LOCs in time of war. The Soviet Union, which has extensive and varied mineral resources and a policy of self-sufficiency, relies on imports for only a few strategic raw materials, as shown in Figure II-4. The United States, on the other hand, relies on foreign sources for most strategic minerals. Both industry and government in the United States must anticipate problems in maintaining critical raw material stocks for military production in wartime and take necessary actions in peacetime to minimize that impact.

US–Soviet Reliance on Selected Mineral Imports



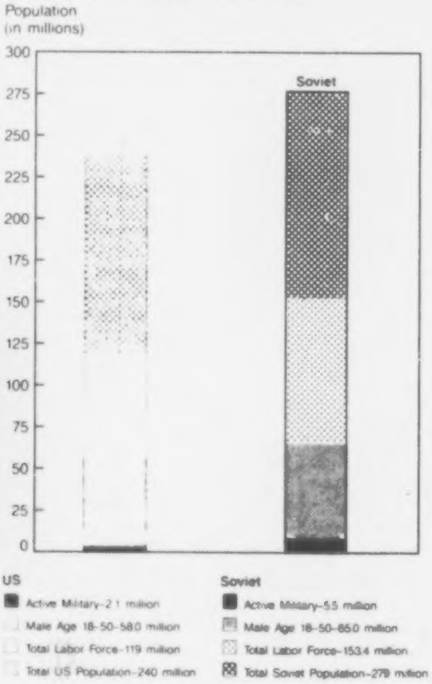
As of 1 January 1986 *FIGURE II-4*

Manpower in Support of Defense

Both the United States and the Soviet Union depend on large labor pools to man their armed forces and provide skilled labor to support their bases. While Soviet military forces are 2-1/2 times larger than those of the United States, the Soviet primary mobilization pool of 18 to 50 year-old males is only 12 percent larger (Figure II-5). Approximately 2 million males reach age 18 annually in each country.

Conscription is the principal source of Soviet military manpower. The period of service is normally 2 to 3 years. Soviet conscription significantly reduces personnel costs and guarantees a sizable trained manpower source for mobilization. Nine million of the estimated 50 million personnel within the Soviet reserve forces have served on active duty during the last 5 years.

US–Soviet Labor Force



As of 1 January 1986 *FIGURE II-5*

On balance, the Soviet manpower advantages lie in the numbers of personnel already under arms or involved in defense production, and the trained military mobilization pool. The size of the US labor pool should be sufficient to meet the demands of both the armed forces and military production because the United States has a less labor intensive production base. The ability of the United States to meet both demands will depend, in part, on the availability of adequate response time.

OVERCOMING A QUANTITATIVE DISADVANTAGE

Technological Leadership

As a result of a larger peacetime military force, greater equipment and manpower reserves, and the ability to mobilize rapidly, the Soviet Union has forces with a quantitative advantage over those of the United States. One US approach to countering numerically superior enemy forces is to field qualitatively superior forces of our own, concentrating resources to produce technology-intensive combat and combat support forces capable of achieving decisive results. This approach requires the United States and its allies to maintain the lead in critical military technologies. Technological progress increases the deterrent value of US forces and provides a hedge against a Soviet technological breakout. US advanced technology also imposes strategic costs on the Soviets by causing them to divert resources from more easily produced systems in order to counter new, more capable US systems. The importance of technology has never been more obvious than it is today. Yet, as Figure II-6 indicates, the US lead in several key technologies is slipping. Strong US and allied technological bases must be maintained if their qualitative lead in fielded systems is to be retained.

US and allied technological leadership and cooperation are even more important now because the Soviets have fielded new equipment which is comparable to, and in some cases exceeds, the quality of that produced in the West. Since there are limits to the forces that the United States and its allies can build and operate, US and allied leaders must search for ways to increase the effectiveness of the forces they do field through the exploitation of emerging technologies, sound operational concepts, and effective training.

Emphasis must be given to technologies that provide the greatest increase in capability and advantage while ensuring the readiness of current forces. High technology, however, cannot provide the solution to all military requirements. Technically superior equipment can only complement, not replace, superior planning, sound doctrine, proper training and sustained support. Every proposed application of new

Relative US–Soviet Standing in the Twenty Most Important Basic Technology Areas*

Basic Technologies	*US Superior*	*US–Soviet Equal*	*Soviet Superior*
1 Aerodynamics/Fluid Dynamics		X	
2 Computers & Software	◀ X		
3 Conventional Warheads (including all chemical explosives)		X	
4 Directed Energy (laser)		X	
5 Electro-Optical Sensor (including infrared)	X		
6 Guidance & Navigation	X		
7 Life Sciences (human factors/biotechnology)	X		
8 Materials (lightweight, high strength, high temperature)	X ▶		
9 Micro-Electronic Materials & Integrated Circuit Manufacturing	X		
10 Nuclear Warheads		X	
11 Optics		X	
12 Power Sources (mobile) (includes automated control)		X	
13 Production/Manufacturing (includes automated control)	X		
14 Propulsion (aerospace and ground vehicles)	X ▶		
15 Radar Sensor	X ▶		
16 Robotics and Machine Intelligence	X		
17 Signal Processing	X		
18 Signature Reduction	X		
19 Submarine Detection	X ▶		
20 Telecommunications (includes fiber optics)	X		

* The list is limited to 20 technologies, which were selected with the objective of providing a valid base for comparing overall US and USSR basic technology. The list is in alphabetical order. These technologies are "on the shelf" and available for application. (The technologies are not intended to compare technology level in currently *deployed* military systems.)

The technologies selected have the potential for significantly *changing* the military capability in the next 10 to 20 years. The technologies are not static; they are improving or have the potential for significant improvements; new technologies may appear on future lists.

The arrows denote that the relative technology level is *changing* significantly in the direction indicated.

The judgements represent overall consensus for each basic technology area. The USSR may be superior in some of the subtechnologies making up each basic technology.

These average assessments can incorporate a significant variance when individual components of a technology are considered.

As of 1 January 1986

FIGURE II-6

technology must strike a balance among technical sophistication, essential readiness, cost, utility, and endurance if it is to be effective in our force structure.

The maintenance of a US technological advantage also depends upon efforts to prevent the transfer of such technology from the United States and other advanced nations to the Soviets and other potential adversaries. The transfer of critical technology to potential adversaries reduces their cost of acquiring new capabilities, allows them to deploy new systems sooner, and provides data that can be used to counter the effectiveness of US weapon systems and equipment.

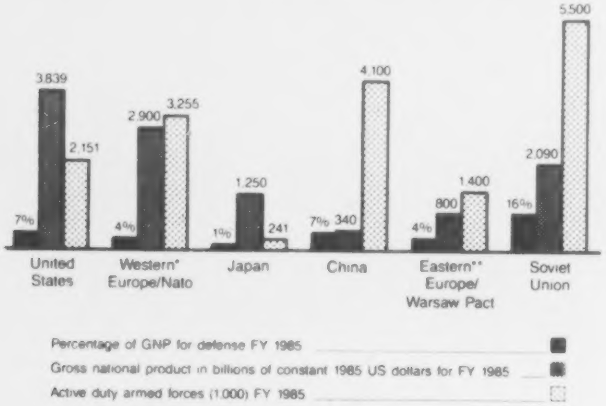
Allied Forces

Strong alliances are an important part of the US military strategy. The relative economic and military strengths of the major nations and blocs are indicated in Figure II-7. The figure shows the impressive potential of the democratic economies. US allies add substantially to the overall defense effort in terms of both defense activities and investment.

US and allied defense efforts must be integrated effectively to ensure that their collective capabilities are realized. The need persists for greater interoperability between US and allied equipment, ammunitions, and techniques, as well as command, control, communications and intelligence (C³I) systems. The United States and its NATO Allies are continuing to improve capabilities for mutual support and coordination. Interoperability with friendly and allied Asian countries is improving through equipment and procedure modifications and frequent combined military exercises.

Strong alliances, combined with a continuing number of important initiatives that are beginning to result in industrial expansion and modernization, enable the United States to counteract the Soviet threat. Positive results from policies and programs established in recent years are being seen. One example is sharing of technology with NATO countries and Japan to reduce redundancy of expenditure in research and development (R&D) efforts. In addition, Congress has supported increased funding for surge industrial re-

Economic and Military Strength of Major Powers



* Excludes US, includes France and Spain
** Excludes Soviet Union, Albania, and Yugoslavia

As of 1 January 1986

FIGURE II-7

sponsiveness. Further activity involves an Industrial Modernization Incentives Program to provide contract incentives that encourage industry to make productivity enhancing capital investments.

A healthy and responsive industrial base and overall economy have been, and will continue to be, important elements of US national security. In the case of the industrial base, vigilant attention to quality, productivity, and efficiency, while at the same time maintaining a sufficient reserve capability to meet any potential crisis, is vital to our enduring national defense.

CHAPTER III. THE MILITARY BALANCE: NUCLEAR FORCES

INTRODUCTION

The military balance is critical to US and allied security. Adverse trends in either nuclear or conventional force capabilities lessen assurance that aggression against US and allied interests can be deterred and increase the risks of coercion. Although significant progress has been made toward redressing trends unfavorable to the West, this progress has not compensated fully for decades of high Soviet investment in force expansion and modernization. US programs are designed to improve the capabilities of the nuclear deterrent through the development and deployment of technologically advanced systems. The modernization of the US TRIAD, coupled with improvements in warning systems, command and control capabilities, and theater nuclear forces, is essential to reverse adverse trends in the nuclear balance and increase stability.

This chapter compares the strategic and nonstrategic nuclear forces of the Soviet Union with those of the United States. Chapter IV assesses conventional forces.

STRATEGIC FORCES

Soviet strategic doctrine holds that with superior capabilities they can fight and win a nuclear war against the United States. The sustained Soviet strategic buildup during the past two decades is a product of this thinking. Figure III-1 shows that the Soviets hold a distinct advantage in number of ballistic missiles. The Soviets continue to improve all aspects of their strategic offensive forces and supporting elements, they have significantly modernized command and control capabilities, and continue to build up their strategic defenses. The Soviets are convinced that strategic nuclear forces will deter attacks on the Soviet Union and reduce the will of others to challenge Soviet political or military actions in general.

Strategic Offensive Forces

US		Soviet	
	ICBMs		
TITAN	17	SS-11	450
MINUTEMAN II	450	SS-13	60
MINUTEMAN III	550	SS-17	150
	1,017	SS-18	308
		SS-19	360
		SS-25	45
			1,373
	SLBMs		
POSEIDON (C-3)	288	SS-N-5	39
TRIDENT I* (C-4)	360	SS-N-6	304
	648	SS-N-8	292
		SS-N-17	12
		SS-N-18	224
		SS-N-20*	80
		SS-N-X-23	32
			983
	Bombers		
B-52G	167	BEAR	130
B-52H	96	BISON	30
FB-111	61	BACKFIRE	270
B-1B	3		430
	327		

Approximate Totals

	US	Soviet
Delivery Vehicles		
• Missiles	1,665	2,356
• Bombers	327	430

* includes SLBMs potentially carried on TRIDENT and TYPHOON on sea trials

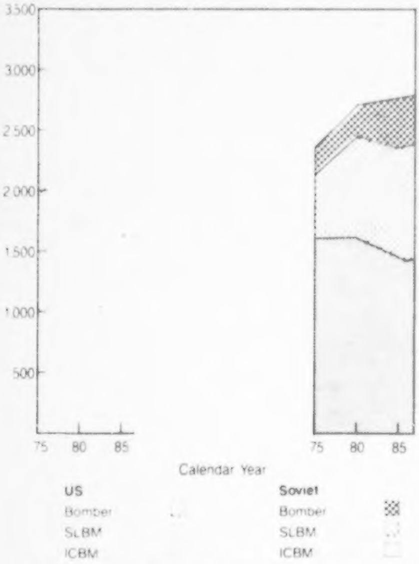
As of 1 January 1986 *FIGURE III-1*

The US strategic nuclear posture is based on the TRIAD, a combination of land-based ICBMs, SLBMs, and long-range bombers. The TRIAD continues to provide a balanced range of offensive retaliatory capabilities. The US nuclear deterrent also includes warning systems and command and control capabilities that provide connectivity and positive control between the strategic forces and the NCA. Additionally, strategic defensive forces contribute to deterrence by reducing the potential effectiveness of an attack.

The need to maintain an effective TRIAD is clear. The capability and variety of the US TRIAD of offensive forces complicate Soviet first strike planning and give the United States the resiliency and flexibility for a measured response to any type of attack. Past US strategic force modernization efforts have not kept pace with the improvements in Soviet capabilities (Figure III-2). The strategic modernization program is designed to rectify this situation and requires sustained commitment.

Strategic Forces*

Strategic Nuclear Delivery Vehicles (SNDV)



* Total active inventory (includes FB-111 and BACKFIRE)

As of 1 January 1986 *FIGURE III-2*

Strategic Offensive Forces

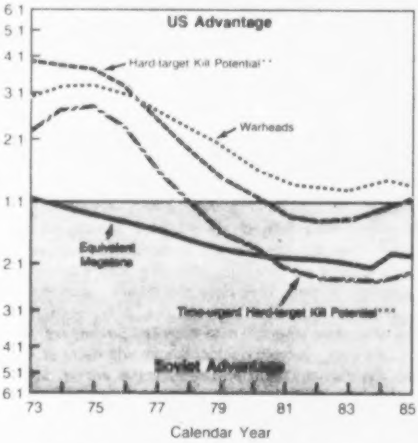
Strategic Offensive Force Potential

The assessment of the military balance is a complex process involving quantitative analyses as well as judgments concerning such intangible and unquantifiable factors as leadership, training, and morale. Static force measurements can provide useful comparisons of capabilities, but do not adequately reflect the interaction of forces in war. This is especially true in light of ongoing Soviet efforts to offset US strategic improvements by increasing the hardness, defense, and mobility of their forces. Whenever possible, static force comparisons should be complemented by dynamic analyses that attempt to incorporate operational factors and provide a better picture of the military balance.

US and Soviet strategic force potential can be compared by an examination of such static measures as equivalent megatons and numbers of systems. The trends in strategic nuclear force capabilities displayed in Figure III-3 will begin to show a reversal as a result of the US strategic modernization program. The relative strategic force capabilities depicted represent a general summation of force attributes. Such measures do not reflect the adequacy of a military force for a specific mission, although they are useful in describing relative trends.

Strategic Forces*

Preattack Static Ratio Comparison



* Total active inventory (includes FB-111 and BACKFIRE)

** Hard-target kill potential represents ability to destroy targets reinforced to withstand some effects of a nuclear blast

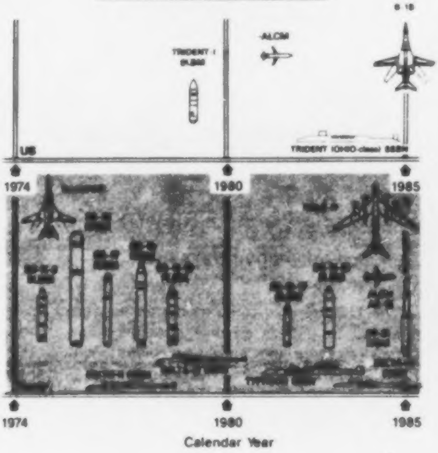
*** Calculations are based on potential against identically hardened targets

As of 1 January 1986 *FIGURE III-3*

The principal factors contributing to the favorable Soviet trend are the deployment of fourth-generation

ICBMs and modernization of their submarine force, which will significantly increase their inventory of high-quality strategic warheads. The Soviet deployments are shown in Figure III-4. The Soviets have increased ICBM strategic warheads more than threefold over the past decade. During the same period, the number of US strategic warheads increased to a lesser extent as the US inventory shifted to a slightly higher number of warheads of lower average yield.

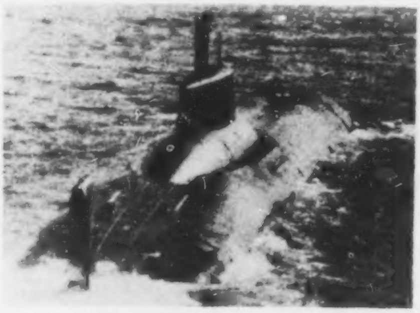
Major Strategic System Deployments



As of 1 January 1986 *FIGURE III-4*

The predominant system of the Soviet nuclear force is the land-based ICBM. The Soviets have achieved a significant increase in the capability of this force through the deployment of large numbers of high quality reentry vehicles (RV). Today, the most accurate versions of the SS-18 and SS-19 missiles are capable of destroying most time-urgent and hardened targets in an initial attack on the United States using multiple targeting. Additionally, the Soviets are mounting a considerable effort to increase strategic force survivability and endurability through mobility. The SS-25 mobile ICBM is only one example of these strategic relocatable targets (SRTs). These SRTs could form the backbone of a significant reserve force capable of eluding our weapon systems.

The Soviets are also modernizing their SLBM force. Since 1974 they have deployed four new classes of nuclear-powered ballistic missile submarines (SSBN) and a fifth is expected to be fully operational soon. The DELTA-II, -III, and -IV-classes reflect evolutionary improvements in submarine and missile systems capabilities. The earlier DELTA-I and the DELTA-II carry the SS-N-8 single RV missile; the DELTA-III carries SS-N-18 multiple, independently targetable RV (MIRVed) missiles. To date, the Soviets have launched four TYPHOON-class SSBNs, three of which are operational. TYPHOON-class submarines carry 20 SS-N-20 missiles. These missiles are estimated to carry six to eight warheads and have a range of approximately 5,000 nautical miles (nm). All of these newer systems are capable of striking



TYPHOON BALLISTIC MISSILE SUBMARINE

USS GEORGIA (SSBN-729)

targets throughout most of the United States from Soviet home waters. The Soviets have launched two DELTA IV class ballistic missile submarines which should become operational soon. The DELTA-IV is intended to carry the MIRVed SS-NX-23, which is also expected to be retrofitted into DELTA-III.

The Soviets continue to improve their strategic bomber force. New production BEAR AS-15/ALCM carriers continue to enter the force. Moreover, these ALCM carriers now conduct routine intercontinental training to various points off the North American coast. Some older, long-range BEAR aircraft are being reconfigured to carry the more capable, supersonic AS-4 air-to-surface missile (ASM), thereby increasing their capability to threaten the continental United States (CONUS). BACKFIRE bombers are estimated to have the technical capabilities to reach some or all of CONUS depending on various assumed operational factors.

Since the early 1970s US strategic force improvements have focused on modifications to existing systems. Major improvements to the US ICBM force since the upgrading of the MINUTEMAN silos in 1973 have been the fielding of higher yield warheads for a portion of the MINUTEMAN III force and a forcewide MINUTEMAN III guidance upgrade program, now approximately 75 percent complete. US SLBM capabilities were improved by equipping the entire force with MIRVed missiles. In addition, between 1979 and 1983, 12 POSEIDON submarines were retrofitted with the more accurate, higher yield TRIDENT I (C-4) missile. This longer range SLBM allows expanded patrol areas with shorter travel distance to patrol stations. The C-4 missile provides the United States a limited capability to launch against Soviet targets from US waters. The OHIO-class SSBN, introduced in 1982, is also fitted with C-4 missiles. A portion of the B-52 fleet is now outfitted with 1,384 ALCMs and aircraft avionics modifications are improving its penetration capability against increasingly dense and sophisticated Soviet air defenses. As strategic modernization progresses, the B-52G/Hs will become standoff cruise missile carriers.

Strategic Offensive Force Modernization

The Soviets have more than 30 new strategic offensive systems in various stages of development. Projections for the next decade include new solid-propellant ICBMs, both silo-based and mobile, a liquid propellant SS-18 follow-on, and improvements to the currently deployed ICBMs. Follow-on systems are expected to have greater accuracy and targeting flexibility. SLBM projections include continued deployment of the SS-N-20 SLBM and testing of the SS-NX-23. The deployment of the BEAR H and eventually the BLACKJACK A intercontinental bombers will significantly increase the airbreathing threat; both bombers will carry AS-15 long-range cruise missiles and improved variants or follow-ons to the AS-15 which are expected by the 1990s. The airbreathing threat will also include land- and sea-launched cruise missiles with maximum ranges of 1,600 nm.

SOVIET BEAR H

The US strategic force modernization program is intended to redress adverse strategic force trends. Offensive force modernization plans include 100 PEACEKEEPER missiles. The first 50 missiles will be deployed in existing MINUTEMAN silos while alternative basing modes for the remaining 50 are examined. Regardless of the basing mode, maintaining deterrence is still the central issue and PEACEKEEPER provides the needed military capability to strengthen our deterrent posture. Initial operational capability (IOC) for the system is scheduled for late 1986. Modernization plans also include development and deployment of a small ICBM capable of mobile basing. IOC is late 1992. In addition, at least one TRIDENT SSBN will be produced per year. The D-5 missile will commence deployment on TRIDENT II configured SSBNs in 1989. The first B-1B bomber has already been delivered to Strategic Air Command (SAC) and the weapon system has an IOC of September 1986. Production of the ATB in the early 1990s will complete the second phase of the bomber modernization program. The diversity of the B-1/ATB combination will ensure a continued US ability to penetrate Soviet airspace and attack the full spectrum of fixed and relocatable targets. Deployment of these systems will demonstrate US resolve to establish a more stable nuclear balance.

The full deployment of 100 PEACEKEEPER missiles will provide 1,000 highly accurate, time-urgent weapons and a partial answer to our shortfall in prompt, hard-target kill capability. As part of the modernization effort, engineering development was started on a small single-warhead ICBM. This new missile will complement the PEACEKEEPER with its prompt, hard-target capability and its low target-value to the Soviets. Early basing considerations have focused on mobility as a primary means to enhance system survivability. Concurrently, the MINUTEMAN force is being modernized to ensure its continued reliability, responsiveness, and supportability.

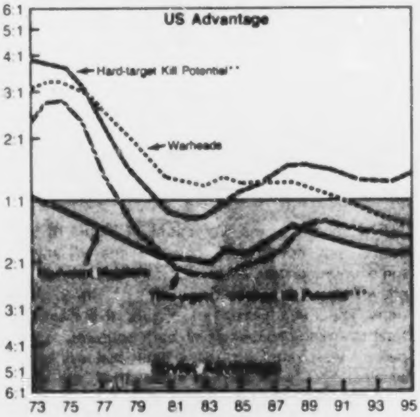
The TRIDENT SSBN will support the D-5 missile now under development. The D-5 missile will deliver a larger payload with improved accuracy at a range of 4,000 nm. The accuracy-payload combination will give the SLBM force a hard-target kill capability at ranges that maintain submarine survivability.

The B-1B is an important TRIAD modernization program. With its high speed, low altitude capability, its reduced radar cross-section, and improved electronic countermeasures (ECM) equipment, the B-1B complicates detection and interception by Soviet defenses. The B-1B is designed to penetrate Soviet defenses well into the 1990s. The strategic modernization program also calls for the development of an ATB with stealth characteristics. Plans call for the ATB to deploy in the 1990s to penetrate an increasingly sophisticated Soviet air defense system.

B-1B

Strategic Forces*

Preattack Static Ratio Comparison (with current Soviet trends)



* Total active inventory (includes FB-111 and BACKFIRE and deployment of 100 PEACEKEEPERs)

** Hard-target kill potential represents ability to destroy targets reinforced to withstand some effects of a nuclear blast.

*** Calculations are based on potential against identically hardened targets.

As of 1 January 1986 *FIGURE III-5*

Figure III-5 compares static measures of the United States and Soviet strategic offensive force capability for the period 1973-1995 and includes current accuracy estimates for the PEACEKEEPER and SS-18 ICBMs. The Soviet force projections represent a moderate force that is a continuation of current trends. The US force consists of weapon systems programmed through 1990 plus those systems in the strategic modernization program to be deployed after 1990.

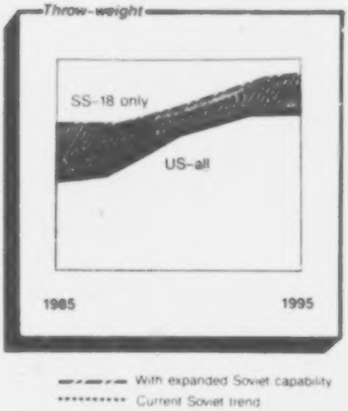
Figure III-5 shows trends favoring the Soviet Union until the late 1980s, at which time the benefits of US modernization programs begin to offset some Soviet advantages. The US advantage in total warheads will continue to decline until the Soviets begin to achieve an advantage in the early 1990s. The projected quantitative and qualitative growth in Soviet offensive weapons should continue to be offset by planned and programmed US modernization efforts. The increased effectiveness of the PEACEKEEPER ICBM, TRIDENT D-5, and the potential capabilities of the small ICBM will act as a counterbalance to the Soviet time-urgent hard target kill potential (HTKP) represented by their SS-18 and SS-19 forces. Even though the United States lost its HTKP advantage in 1981, improvements in US ballistic missiles and the bombers and continued deployments of ALCMs will begin to move the HTKP toward a US advantage. It should be noted, however, that the calculation of HTKP did not consider that Soviet ICBM silos are hardened to a greater degree than those of the United States or that Soviet air defenses are more extensive. In the late 1980s, US deployments of modernized systems should also reverse the trend in equivalent megatons; the Soviets will retain an equivalent megatonnage advantage, however.

The validity of the projections in Figure III-5 depends upon continued progress in the US strategic force modernization effort and assumes that the Soviets will not deploy forces in excess of current projections. The static measures in Figure III-5 display the total strategic capabilities of both countries, a comparison which includes many older and less capable systems. Yet, as shown in Figure III-6, the current Soviet force of 308 SS-18s has more throw-weight potential than the combined force of all current US ICBMs and SLBMs. If the Soviets increase the number of warheads carried on each SS-18, which is within their capability, the corresponding equivalent megatons and HTKP of the SS-18 could approach the capabilities of the entire modernized US ICBM and SLBM force.

Strategic Offensive Force Effectiveness

Static measures neglect some differences in force quality and employment strategy. These aspects are best captured in a dynamic comparison that examines Soviet improvements in defensive forces, counterforce capabilities, reload and refire capabilities, and wide deployment of strategic offensive systems in multiple basing modes. The Soviets have sought to limit damage to their warfighting capability by hardening ICBM silos to levels well above those of the hardest US silos and deploying new generation missiles designed for mobile operation. The Soviets have begun upgrading the antiballistic missile (ABM) system deployed around Moscow, prepared hardened underground facilities for their key leadership and civilian work force, and planned for dispersal of conventional forces and urban populations. Static measures reflect none of these factors.

SS-18 vs Entire US Missile Force (ICBM & SLBM)



As of 1 January 1986 *FIGURE III-6*

Dynamic analyses reflect the different target objectives and characteristics for each side. Studies show that potential targets in the United States are considerably fewer in number and less dispersed than those in the Soviet Union. Further, targets in the Soviet Union have been hardened to a far greater degree. Additionally, these analyses assumed that the ABM Treaty remained in effect, opposing sides employed nuclear weapons only in homeland exchanges, and all forces on both sides received and executed a launch order. Improvements to US forces resulting from the strategic modernization program will help lessen this disparity and contribute to stability.

Command and Control

Soviet Command and Control

The Soviets have deployed extensive and modern command, control, and communications systems to provide centralized control over their military commands. The Soviets expect to be able to communicate with their forces during a strategic nuclear exchange and to direct all operations. Toward this end, the Soviets have constructed hardened, deep-underground facilities for the primary national military and civilian authorities. These facilities are equipped with multiple means of communication. Soviet systems emphasize survivability, redundancy, and flexibility and provide extensive internetting of communications from the Soviet high command to lower echelons.

US Command and Control

The credibility of the US strategic deterrent depends on command and control systems that provide positive control for the effective employment of the TRIAD. US command and control systems require security, speed, flexibility, reliability, and survivability to assure connectivity before, during, and after a nuclear attack.

Before and during the early stages of an attack, command and control systems must be able to provide timely warning to the NCA and strategic forces that an attack has been initiated. These systems must not only define the nature of the attack to allow appropriate defensive and damage-limiting actions, but also permit the NCA to direct the appropriate response. Tactical warning and attack assessment (TW/AA) sensors and communications are used to detect and forward hostile attack information to command authorities. Reliable surveillance systems must provide timely, unambiguous warning of attacking missiles.

Effective missile warning requires the sensing of an attack by at least two different methods in order to increase warning confidence. US ground- and space-based systems are designed to provide the necessary warning and confirm the launch of attacking missiles. The capabilities of many TW/AA systems are improving.

Many systems are vulnerable to high-altitude nuclear effects. Numerous improvements are being made by the introduction of new systems which will reduce communications uncertainties during attack and provide the NCA more effective warning and assessment for force management. Improvements such as jam-resistant secure communication equipment, laser communication data links, secure voice conferencing, low to extremely low frequency communications, and extremely high frequency communication satellites will be fielded.

The Worldwide Military Command and Control System (WWMCCS) provides the means for the NCA, JCS, and commanders in chief of the unified and specified commands (CINCs) to direct and control the operations of US military forces in crises and during conventional or nuclear war. The most survivable element of the WWMCCS is a series of worldwide airborne command posts and communications relay aircraft referred to as the WWABNRES (WWMCCS Airborne Resources System). In the event ground systems are damaged or destroyed, the WWABNRES provides communications through which strategic nuclear forces can be directed.

The National Emergency Airborne Command Post (NEACP) is the hub of the WWABNRES system. The NEACP is based inland to ensure that it can be launched and survive a surprise attack. The addition of automatic data processing (ADP), expanded use of satellite communications, secure-voice capabilities, and conversion of the NEACP fleet to the E-4B aircraft are increasing the ability of this system to support the NCA.

E-4B NEACP

Continued development and deployment of the Groundwave Emergency Network and a new communications satellite system, Military Strategic Tactical Relay (MILSTAR), are required to ensure that NCA decisions reach executing forces during the critical early stages of an attack. The command and control systems of airborne command posts are being modified to protect against high-altitude nuclear detonation effects. Additionally, an ELF communications system is being developed to improve strategic connectivity to SSBNs.

The Nuclear Planning and Execution System will enhance data processing capabilities for the National Military Command System (NMCS) and CINCs. Deployment of the Nuclear Detonation Detection System on Global Positioning System satellites will significantly improve assessment capabilities.

Strategic Defense

Strategic Defensive Forces

The Soviet Union has pursued a full range of strategic defensive programs to protect leaders, preserve vital functions of government, and limit damage from retaliation. The US strategic defensive programs have been less comprehensive and have focused primarily on surveillance, warning, aircraft modernization, and limited air defense. Deployment of effective US strategic defensive systems would enhance deterrence by adding uncertainty to the possible outcomes of nuclear conflict and undermining an attacker's confidence in success.

The United States is reexamining the potential contributions of strategic defense toward maintaining stable deterrence. In the past, US strategic deterrence relied largely upon an assured retaliation capability. Both the Soviet and US strategic forces were relatively secure from a disarming attack. The continued Soviet strategic modernization and buildup threatens this stable environment. Effective US defenses can increase the uncertainty of the outcome of a Soviet preemptive attack and help strengthen deterrence. New technologies must be evaluated for US strategic defense.

Missile Defense

The Soviets continue to modernize their ABM system around Moscow and have a strong development program which could permit relatively rapid and widespread ABM deployment supported by a network of radars like the one near Krasnoyarsk, which is a violation of the ABM Treaty. In addition, vigorous Soviet directed-energy research and development efforts could lead to an additional ground-based ballistic missile defense (BMD) capability in the 1990s. To complement their BMD efforts, the Soviets have developed an extensive tactical warning and attack assessment capability based on launch detection satellites and over-the-horizon and phased-array radars.

Although the ABM Treaty allows limited defense of one site, the United States abandoned this approach in the 1970s (Figure III-7). If reinstituted, an active US defense will require a survivable AW/AA system that provides, in addition to detection and warning, the capability to discriminate weapons from non-threats and the capability to perform battle-management functions.

Defense Against Ballistic Missiles

US

ABM DEFENSE
- None since SAFEGUARD phased out in 1976
- Option for early deployment of terminal defense—hedge against USSR breakout
- Strategic Defense Initiative (1983)—research to determine technical feasibility of multilayered BMD

DIRECTED ENERGY WEAPONS
- Candidate technology under Strategic Defense Initiative

TACTICAL WARNING AND ATTACK ASSESSMENT
- 3 long-range detection and tracking radars (BMEWS)
- Phased-array warning system (PAVE PAWS)
- Perimeter acquisition radar attack characterization system
- Satellites
- COBRA DANE

Soviet

ABM DEFENSE
- Deployment at Moscow within ABM Treaty
  - Limited capability
  - Upgrade projected for 1987
- Endo- and exo-atmospheric interceptors
- Target acquisition, tracking, and hand-off radars
- Systems available for rapid, widespread deployments beyond ABM Treaty

DIRECTED ENERGY WEAPONS
- Vigorous R&D with possible BMD applications in 1990s
- Program identified for laser BMD

TACTICAL WARNING AND ATTACK ASSESSMENT
- Over-the-horizon radars
- Phased-array radars
- Launch detection satellites

As of 1 January 1986

FIGURE III-7

The current space-based surveillance system relies on sensors aboard satellites. These satellites cover Soviet SLBM and ICBM launch areas. Survivability is being improved by various programs.

The current ground-based radars, for example, PAVE PAWS, Perimeter Acquisition Radar Attack Characterization System (PARCS), Ballistic Missile Early Warning System (BMEWS), and COBRA DANE confirm satellite warning of ICBM attacks from the north and SLBM attacks from normal Soviet submarine operating areas. The activation of two southern PAVE PAWS sites in the late 1980s will complete the radar coverage of likely SLBM approach routes.

PAVE PAWS RADAR

BMEWS currently employs equipment based on obsolescent technology that is increasingly difficult to maintain and support. BMEWS radars are being upgraded with a two-face phased-array system at Thule, Greenland, and a three-face phased-array system at Fylingdales, United Kingdom. These upgrades will improve range resolution, provide a greater ability to count incoming vehicles, and ensure more accurate impact prediction.

These improvements will provide a warning capability against the projected Soviet threat. In response to the increasingly time-stressed nature of the aerospace threat, the US must be capable of evaluating integrated information from strategic intelligence sources, and from ballistic missile, atmospheric, and space warning sensors to provide a single assessment and notification of imminent or actual attack on the United States.

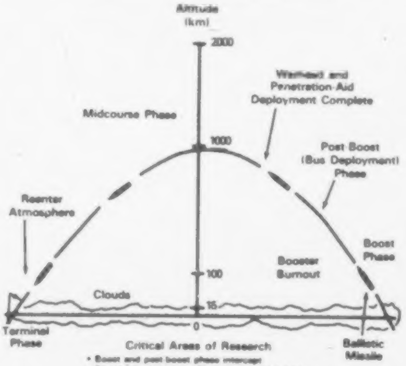
Other systems contribute unique capabilities to monitor Soviet nuclear forces. Strategic airborne reconnaissance aircraft carry a variety of sensors to detect ground and air activities. For ocean surveillance, the coordinated efforts of P-3s, submarines, and surface ships with towed sensor arrays are key to tracking ballistic missile submarines.

Under the SDI, the United States is conducting an intensive research effort focused on advanced defensive technologies that may lead to systems capable of defeating ballistic missiles. A number of concepts, involving a wide range of technologies, are being examined. The effort does not represent a departure from the fundamental US support for deterrence.

No single concept or technology for the SDI has been identified as most appropriate. Initial research indicates that it may be feasible to increase stability through employment of a multilayered defense capable of engaging enemy missiles and reentry vehicles in all stages of flight (see Figure III-8). The SDI effort is also examining technologies with potential against short-range ballistic missiles, which could extend protection against nuclear, chemical, biological, and conventional attack to the Allies and deployed US forces.

The SDI is addressing the protection of both civilian and military assets. The research seeks to exploit inevitable technological evolution and is a prudent

Phases of a Typical Ballistic Missile



Altitude (km)
2000
1000
100
15
0
Midcourse Phase
Warhead and Penetration-Aid Deployment Complete
Post Boost (Bus Deployment) Phase
Reenter Atmosphere
Boost Phase
Booster Burnout
Clouds
Terminal Phase
Ballistic Missile
Critical Areas of Research
• Boost and post-boost phase intercept
• Discrimination among RVs, decoys, and debris
• Survivability
• Interceptors
• Battle management

As of 1 January 1986 *FIGURE III-8*

response to active Soviet research and development activities in ballistic missile defense.

The Soviet Union has already deployed a BMD system which is permitted under the 1972 ABM Treaty. The Soviets are also engaged in research and development of a rapidly deployable ABM system that raises concerns about their potential ability to deploy a nationwide ABM system within the next decade in violation of the ABM Treaty. SDI research of the United States will be consistent with terms of the ABM Treaty. The program also provides a prudent hedge against a possible Soviet breakout from the ABM Treaty, holds the promise of a better way to deter aggression, strengthens stability, and increases US and allied security.

Air Defense

The Soviets emphasize air defense and continue to upgrade their capabilities. The Soviets have 4,000 fighter/fighter-interceptors capable of air-to-air combat in defense of the Soviet Union of which some 1,200 are dedicated to a strategic defense mission. Deployment of the FOXHOUND A, the first Soviet fighter-interceptor to have full lookdown-shootdown and multiple-target engagement capabilities, continues. Operational deployment of the FLANKER B, the Soviets' newest lookdown-shootdown capable fighter-interceptor is expected soon, while deployment of the new FULCRUM A is gaining momentum.

SOVIET FOXBAT INTERCEPTOR

The Soviets have deployed nearly 9,400 strategic surface-to-air missile (SAM) launchers. Of equal importance, they continue to develop and deploy improved SAM systems. The SA-10 is estimated to be effective against small, low-altitude targets. The SA-X-12 is a modern, sophisticated, long-range mobile tactical SAM and antitactical ballistic missile system that could be deployed in the near future. The SA-5, SA-10, and SA-X-12 may have the potential to intercept some types of US ballistic missiles.

For surveillance of their airspace, the Soviets have deployed early-warning aircraft and over 10,000 search and track radars at over 1,200 sites. The Soviets are also producing the MAINSTAY airborne warning and control aircraft. Forward air defense capabilities will be significantly improved with deployment of MAINSTAY, especially when it operates with lookdown-shootdown capable aircraft such as the FOXHOUND and FLANKER. Soviet air defenses will continue to pose a major challenge for the US bomber force.

SOVIET AWACS

The United States and Canada share continental air defense responsibilities under the provisions of the North American Air Defense Agreement. Both nations assign forces to the North American Aerospace Defense Command (NORAD).

Current US air defenses are composed of surveillance radars, Airborne Warning and Control System (AWACS) aircraft, interceptor aircraft, and an integrated command and control system. Deployment of North Warning System (NWS) and over-the-horizon backscatter (OTH-B) radars will improve the detection capability against airbreathing threats. The effectiveness of OTH-B in detecting cruise missiles is promising. OTH-B radars can provide surveillance of potential attack routes from 500 to 1,800 miles. AWACS patrols can provide some coverage until the present Distant Early Warning (DEW) Line radars are replaced by the NWS and OTH-B radars. The NWS searching north and OTH-B radars searching east, west, and south will provide a capability for tactical warning at ranges that allow increased response time against aircraft and cruise missiles. In the event of attack, survivable AWACS aircraft can extend this surveillance capability through the trans- and post-attack phases.

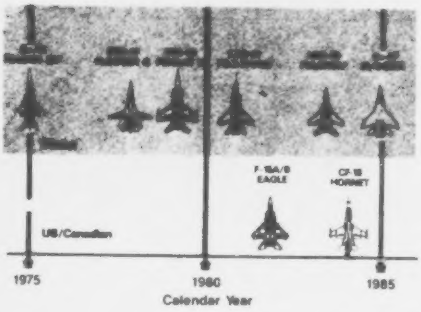
Peacetime surveillance of continental airspace has been strengthened by the integration of selected civilian and military radar sites into the Regional Operations Control Centers that comprise the Joint Surveillance System. The system would provide regional air defense command and control during the initial stages of an attack.

Improvements in surveillance capability have been accompanied by interceptor aircraft upgrades. US F-106 and eventually F-4 aircraft are being replaced by more capable F-15s and in the future an air defense competition aircraft.[1] Additionally, Canada's CF-101 interceptors have been replaced with CF-18 aircraft. The addition of the advanced medium-range air-to-air missile (AMRAAM) will permit many of these modern aircraft to possess a lookdown-shootdown capability to improve the air defense of North America. This capability will become increasingly important as the Soviets expand their cruise missile inventory. Figure III-9 illustrates the modernization of the US and USSR interceptor aircraft.

Space Defense

The Soviet Union has the world's only operational antisatellite (ASAT) system. The Soviets' ASAT is a weapon capable of attacking satellites in near-earth orbits. Additionally, GALOSH antiballistic missile interceptors have an inherent ASAT capability when used in a direct ascent mode. Vigorous Soviet R&D efforts in ground-based, airborne, and space-based directed-energy technology have potential ASAT applications.

Air Defense
Interceptor Aircraft Deployments



As of 1 January 1986 *FIGURE III-9*

The United States is continuing to develop ASAT weapon systems to deter Soviet ASAT attacks of US satellites. Should deterrence fail, US ASAT systems must be able to reduce the effectiveness of Soviet attacks. The initial US capability has been demonstrated and is expected to be provided by the Air-Launched Miniature Vehicle (ALMV) a small missile launched from F-15 aircraft.

F-15 IN ASAT CONFIGURATION

Other Defense Measures

Both the United States and the Soviet Union have given missile silos and essential command and control systems their first priority in programs to harden strategic systems against overpressure from a nuclear detonation. The results of hardening are evident in the characteristics of strategic targets in each nation. The Soviet Union has significantly improved its strategic capability by dispersing critical facilities, hardening structures, and developing mobile systems. For the most part, the United States has not extended hardening to economic or government facilities beyond those actually involved in strategic intelligence and command and control operations.

The Soviet Union places far more emphasis on civil defense than does the United States. The Soviets view civil defense as an integral part of their strategic posture and invest heavily in the protection of their key leadership, essential work force, critical economic facilities, and general population. Soviet programs include construction of protective relocation facilities, organizational planning, training, and the commitment of manpower to the civil defense structure. US efforts do not provide for adequate support of a dispersed population or protection of war-supporting industry and its labor force.

Strategic Defense Summary Assessment

Figure III-10 illustrates the key features of the US and Soviet strategic defense force postures.

NONSTRATEGIC NUCLEAR FORCES

The United States must possess a broad spectrum of nuclear force options to deter aggression and defend its interests should deterrence fail. Nonstrategic nuclear forces (NSNF) provide an escalatory response below the level of strategic nuclear forces. NSNF consist of land-based systems for battlefield support and intermediate-range strikes, and sea-based systems for land strike and antiship, antisubmarine, and antiair warfare.

NSNF support conventional forces by providing a major deterrent to conventional, theater nuclear, and chemical attack, and are essential to a strategy of flexible response. NSNF provide a range of employment options that create uncertainty for potential aggressors concerning US and Allied response. Such forces could deny the enemy sanctuary to mass forces behind the immediate battle zone and break up the momentum of an offensive.

Although US NSNF are available for use worldwide, the majority of these forces are located in Europe. The primary NSNF threat to US and allied forces is also located in Europe, although SS-20 missiles based in eastern and central USSR and Soviet sea-based nuclear forces pose a growing threat to Asia. The NSNF are structured differently for their missions in Europe and Asia. NATO NSNF are deployed in a relatively confined geographical area, and are primarily land-based. US NSNF in the Pacific are geographically dispersed and more dependent on sea-based capabilities. The following assessments of NSNF are provided in a NATO-Warsaw Pact context.

Intermediate-Range Nuclear Forces

Intermediate-range nuclear forces (INF) include land based missiles and aircraft capable of striking targets beyond the general area of the battlefield, but not capable of intercontinental range.

Longer Range Intermediate-Range Nuclear Forces

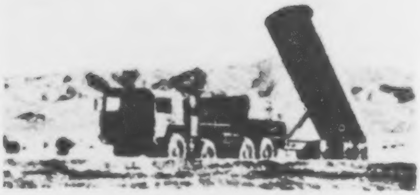
Longer range intermediate-range nuclear force (LRINF) missiles have ranges between 1,800 km and

Strategic Defense Summary

US	Soviet
BALLISTIC MISSILE DEFENSE • Dismantled • 1983 Strategic Defense Initiative (Research)	BALLISTIC MISSILE DEFENSE • Deployed around Moscow—within ABM Treaty • Systems available for potential breakout
AIR DEFENSE • SAMs phased out in 1975 • 300 Interceptors • 100 Radars	AIR DEFENSE • 9,400 SAM launchers • 1,200 Interceptors • 10,000 Radars
SPACE DEFENSE • Early interceptor dismantled • F-15 launched ASAT in development	SPACE DEFENSE • Orbital ASAT operational • Potential use of ABM as ASAT • Potential ground-based lasers • Potential electronic warfare threat
CIVIL DEFENSE • Limited program	CIVIL DEFENSE • Strong program
RELIANCE ON RETALIATORY CAPABILITY • Effective tactical warning and attack assessment • Survivable TRIAD	RELIANCE ON DAMAGE LIMITATION AND OFFENSIVE CAPABILITY • Effective tactical warning and attack assessment • Active defenses • Passive defenses • Survivable offensive capability

As of 1 January 1986

FIGURE III-10



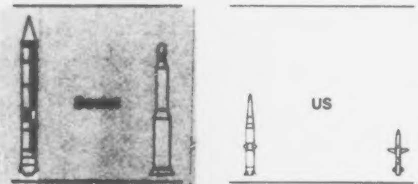
GLCM TRANSPORTER-ERECTOR-LAUNCHER (TEL)

5,500 km. In late 1983 NATO began implementing its 1979 decision to modernize LRINF with initial deployments of PERSHING II and GLCMs. These actions were undertaken because of Soviet deployments of SS-20 missiles and the unwillingness of the Soviets to agree to INF reductions after 2 years of negotiation. Additional GLCM missiles arrived in Belgium in March 1985 displaying NATO unity. NATO deployments are scheduled to continue through 1988 at which time there will be 108 PERSHING IIs and 464 GLCMs in Europe unless an arms control agreement reduces LRINF missiles to lower levels.

Full deployment of LRINF missiles will increase NATO's nuclear capability significantly and partially offset SS-20 deployments. Both the PERSHING II and GLCM systems have ranges exceeding those of other NATO land-based systems deployed in Europe and incorporate technologies which make them effective against critical targets. The PERSHING II missile provides an additional capability because it can strike time-urgent targets.

As shown in Figure III-11, the PERSHING II and GLCM do not compensate fully for deployed Soviet LRINF capabilities. Soviet SS-20 systems, with 3 independently targeted warheads per missile, already greatly outnumber the 572 warheads that will

Longer Range INF Missiles



	Soviet		US	
	SS-4	**SS-20**	***PERSHING II***	***GLCM***
Warheads	1	3 MIRV	1	1
Range (km)	2,000	5,000	1,800	2,500
Operational flight time	Minutes	Minutes	Minutes	Hours
Operational mode	Fixed	Mobile	Mobile	Mobile
Global numbers deployed	112	441*	108	128
Year operational	1959	1977	1983	1983

* Includes 36 launchers currently unlocated

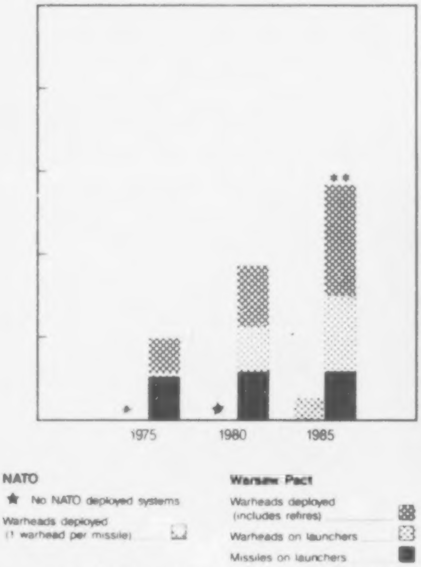
As of 1 January 1986

FIGURE III-11

be made available by NATO LRINF deployments (Figure III-12). The availability of SS-20 refires and older SS-4s further contribute to the imbalance. In addition, the SS-20 has a much greater range than any NATO LRINF system. As shown in Figure III-13, the SS-20 can cover the entire European theater, all of East Asia, and other vital areas. The SS-20 can reach most significant targets in Western Europe, even when deployed beyond the NATO LRINF range. In addition, we expect the Soviets to deploy the SSC-X-4 ground-launched cruise missile opposite NATO over the next several years. Figure III-14 compares NATO and Warsaw Pact INF capabilities.

NATO–Warsaw Pact
Longer Range INF Missiles*

Worldwide



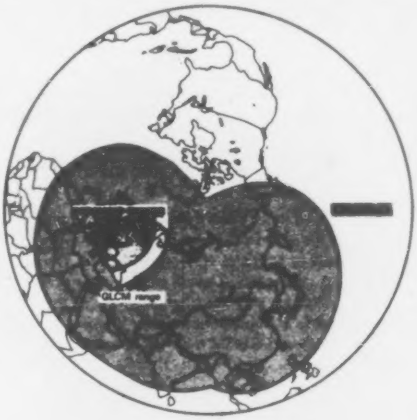
*Includes: US PERSHING II, GLCM and Soviet SS-4, SS-5, SS-20
SSC-X-4 in 1990 (expected IOC)

**SS-5 no longer active

***SS-4 no longer active

As of 1 January 1986 ***FIGURE III-12***

PERSHING II and GLCM Coverage
& SS–20 Coverage from Soviet Bases



As of 1 January 1986 ***FIGURE III-13***

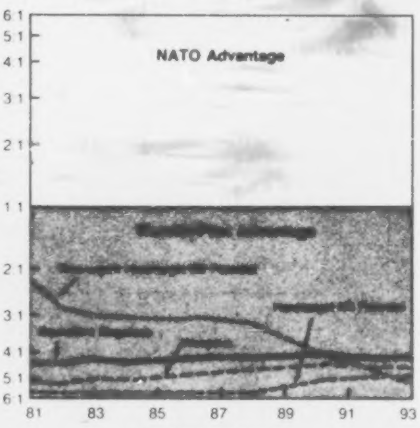
SOVIET SS-20

Shorter Range Intermediate-Range Nuclear Forces

Shorter range intermediate-range nuclear forces (SRINF) have ranges from beyond the immediate battlefield to 1,800 km. Withdrawal of US PERSHING IA missiles from Europe was completed in 1985 in conjunction with the deployment of the PERSHING II

Intermediate–Range Nuclear Forces* —Europe—

(Land-based Missiles and Dual-capable Aircraft)
Preattack Static Ratio Comparison
(Missiles on Launcher Only)



* Includes only those weapon systems with ranges greater than 300km and no refire missiles

As of 1 January 1986 **FIGURE III-14**

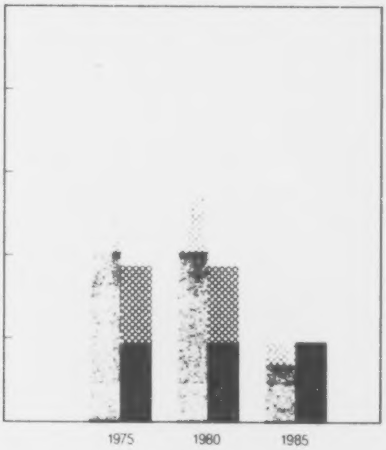
systems. With this withdrawal, the German PERSHING IA missiles are the only SRINF missiles remaining in the NATO inventory. This change is reflected in Figure III-15.

The Soviet modernization of SRINF systems continues. Deployment of the SS-23 missile, with its improved accuracy, has increased the number and capability of SRINF systems facing NATO. The number of SRINF missiles available to the Warsaw Pact is expected to grow considerably during the remainder of the decade.

SRINF missiles provide the Soviet Union with a significant capability. The forward deployment of SRINF systems will reduce the number of Soviet LRINF systems required to accomplish targeting objectives.

NATO–Warsaw Pact Shorter Range INF Missiles

Europe



NATO*

Total warheads on missiles ☐

Missiles on launchers (1 warhead per missile) ■

*US PERSHING 1A (withdrawal complete in 1985)

FRG PERSHING 1A

Warsaw Pact**

Total warheads on missiles ▩

Missiles on launchers (1 warhead per missile) ■

**Soviet SS-12/MOD 2, SS-23

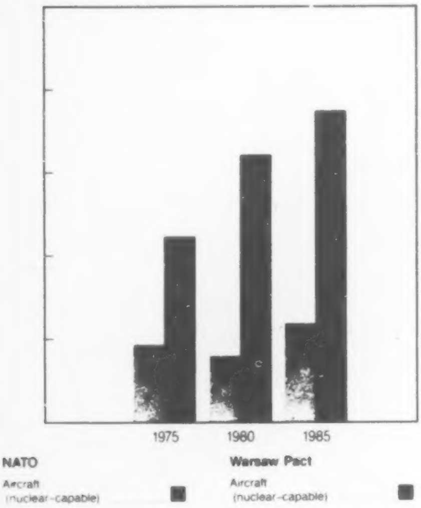
As of 1 January 1986 **FIGURE III-15**

Intermediate-Range Nuclear Forces Aircraft

INF aircraft are those land-based, nuclear-capable aircraft with less than intercontinental range. Dual-capable aircraft (DCA) make up the preponderance of the INF systems capable of delivering nuclear weapons beyond the immediate battlefield. Figure III-16 shows that both the Warsaw Pact and NATO rely heavily on these systems and the Warsaw Pact holds a significant numerical advantage. The F-111 and TORNADO are currently the only INF aircraft available to NATO which have the ability to penetrate enemy defenses at low altitude, day or night, in any weather. NATO will continue to make qualitative and quantitative improvements in its INF aircraft, such as the F-16 and TORNADO. The addition of the F-15E

NATO–Warsaw Pact INF Aircraft

Europe



As of 1 January 1986 *FIGURE III-16*

dual-role fighter to the inventory in the late 1980s will significantly improve NATO's all-weather capability.

Changes to these Soviet systems for the next few years involve the introduction of newer, more capable systems. As with NATO systems, most Warsaw Pact INF aircraft are limited to SRINF-equivalent ranges. Only the BACKFIRE, BLINDER, and BADGER bombers are capable of longer ranges.

NATO INF aircraft have both a nuclear and conventional role. Because of possible attrition during conventional operations and the fact that not all INF aircraft are committed to the nuclear role, the actual number of DCA available would depend on the nature and sequence of the aggressor's attack.

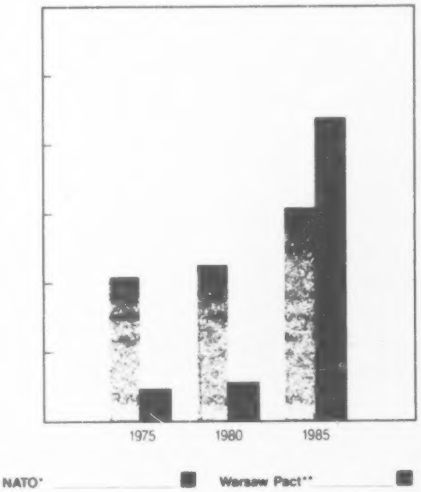
Short-Range Nuclear Forces

In the past, NATO had a clear advantage over the Warsaw Pact in the number of deployed short-range nuclear force (SNF) missiles, rockets, and artillery capable of striking targets only in the immediate battlefield area (Figure III-17). This advantage was primarily due to the large NATO inventory of dual-capable 155 millimeter (mm) howitzers. The Soviets have fielded nuclear-capable 152mm guns, 203mm guns, and 240mm self-propelled mortars; also, the older 152mm howitzer is considered to be nuclear-capable. These systems are complemented by a new nuclear missile, the SS-21, which is replacing the FROG 7. The Soviet deployments of these SNF weapons significantly increase their battlefield nuclear capability.

NATO–Warsaw Pact Short–Range Nuclear Forces

Europe

Launchers/Artillery Tubes Only



*US LANCE 8-inch, 155mm

Non-US NATO LANCE, HONEST JOHN, 8-inch 155mm

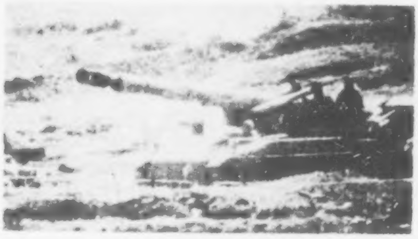
**Soviet SS-1, SS-21, FROG 203mm, 240mm, 152mm systems

Non-Soviet Warsaw Pact SS-1, SS-21, FROG, 152mm

As of 1 January 1986 *FIGURE III-17*

The United States is also upgrading SNF systems. This modernization effort is required to replace aging, less reliable warheads and provide weapons that can more effectively counter the Warsaw Pact threat.

Modernized artillery fired atomic projectiles (AFAP) use improved technology, resulting in significantly increased range, greater accuracy, higher reliability, improved responsiveness, enhanced security and command and control. Only the new 8-inch projectile (W79) is currently being built.



M-110 A2 8" HOWITZER

Compared to other SNF systems, the large number of 155mm howitzers in Europe increases by a factor of five the number of potential SNF delivery systems with which Soviet planners must contend. The W82 modernized 155mm AFAP is in the final stages of development. This weapon is designed to replace the W48, which is nearing tne end of its useful life. The W82 offers a higher yield, increased range, and significantly improved military effectiveness. Until the W82 is fielded, a significant number of the less capable, first generation 155mm AFAPs will be required.

The LANCE, with its 115 km range, remains our longest range SNF system. The LANCE provides the ground commander an important capability to threaten the massed armored formations favored in Soviet doctrine.

Sea-Based Nuclear Forces

Sea-based nuclear forces consist of strike, antiship, air defense, and antisubmarine warfare (ASW) systems. Carrier based aircraft (A-6, A-7, F/A-18) with nuclear bombs continue to provide the United States with a flexible nuclear land attack and antiship capability. The recently deployed TOMAHAWK TLAM/N significantly enhances the ability to strike land targets by providing increased range over carrier aircraft and allowing dispersal of nuclear strike assets over a large number of naval platforms.

Naval forces are equipped with TERRIER nuclear antiair warfare (AAW) missiles, B57 depth bombs, and antisubmarine rocket (ASROC) nuclear depth charges. A nuclear warhead is under development for the SM-2 surface-to-air missile.

Other Nuclear Forces

The United Kingdom maintains an SLBM force consisting of 4 SSBNs, each of which carries 16 POLARIS A-3 missiles. The United Kingdom plans to purchase the US TRIDENT system to replace its POLARIS systems in the 1990s. France is not part of the integrated NATO military structure, but maintains an independent nuclear capability.

Command and Control

Soviet Command and Control

For a conflict involving both conventional and nonstrategic nuclear forces, the Soviets have a command and control system that provides for both decentralized and centralized control. Theater force communications networks are integral to the national command communications systems. Soviet command and control capabilities are highly survivable, redundant, and flexible. In addition, the Soviets are maintaining vigorous research and development programs to upgrade such systems.

US Command and Control

US NSNF command and control systems must provide for the positive control and custody of nuclear weapons and the assured command and control of our theater nuclear forces through the full conflict spectrum. Our NSNF command and control systems have been improved in the areas of communications reliability and security. There are several communications upgrades under way to enhance their endurance and availability between now and the mid-1990s. These programs are designed to provide for continuity of operations and command and required communications connectivity after nuclear exchanges. In addition, new programs are being developed to provide for the flexible, accurate, and timely management, allocation, and execution of the force and its mission up to, during, and through the postattack period.

CHAPTER IV. THE MILITARY BALANCE: CONVENTIONAL FORCES

INTRODUCTION

World events have demonstrated that potential adversaries of the United States are willing to use military force in the pursuit of their objectives. Although US nuclear capabilities continue to provide deterrence at that level, the potential for conflict escalation with US and Soviet involvement remains high. In addition to nuclear forces, strong US conventional forces are essential to provide visible evidence of the US commitment to deter and, if necessary, counter military attacks against US and allied interests at all levels of conflict. Should deterrence fail, conventional forces would be employed to counter enemy attack, limit the scope of conflict if possible, and terminate hostilities on terms favorable to the United States and its allies. Additionally, conflict within the Third World nations is a reality today. The use of Soviet surrogates and the proximity of existing insurgencies to areas of vital US interests present an additional challenge to equipping and training conventional forces. Modern, well-balanced, and mobile conventional forces increase the options available to the National Command Authorities during such crises.

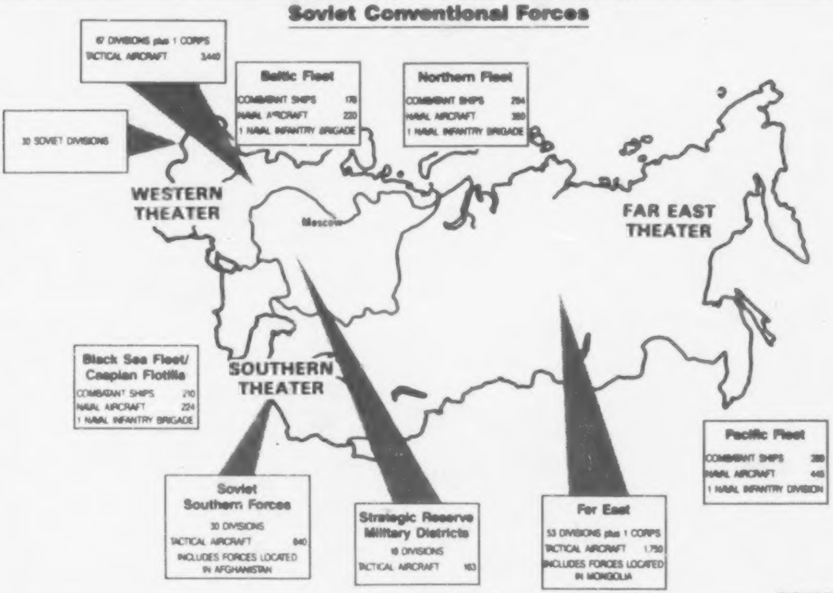
This chapter provides an overview of US conventional forces, assesses the global and selected regional military balances, highlights conventional force programs essential to implementation of US military strategy, discusses considerations for employing and supporting the forces, and reviews improvements in Service interoperability, planning and programming, force development, doctrine, and joint warfighting concepts.

GLOBAL OVERVIEW

Soviet Posture

Soviet forces deployed in Eastern Europe, together with other Warsaw Pact forces, constitute the major military threat to the Western allies. Major air, land, and naval forces also face Southwest Asia, China, and the Northwest Pacific (Figure IV-1). The Sovi-

Soviet Conventional Forces


67 DIVISIONS plus 1 CORPS
TACTICAL AIRCRAFT 3440
30 SOVIET DIVISIONS
Baltic Fleet
COMBATANT SHIPS 178
NAVAL AIRCRAFT 220
1 NAVAL INFANTRY BRIGADE
Northern Fleet
COMBATANT SHIPS 284
NAVAL AIRCRAFT 380
1 NAVAL INFANTRY BRIGADE
WESTERN THEATER
Moscow
FAR EAST THEATER
Black Sea Fleet/ Caspian Flotilla
COMBATANT SHIPS 210
NAVAL AIRCRAFT 224
1 NAVAL INFANTRY BRIGADE
SOUTHERN THEATER
Pacific Fleet
COMBATANT SHIPS 280
NAVAL AIRCRAFT 445
1 NAVAL INFANTRY DIVISION
Soviet Southern Forces
30 DIVISIONS
TACTICAL AIRCRAFT 840
INCLUDES FORCES LOCATED IN AFGHANISTAN
Strategic Reserve Military Districts
18 DIVISIONS
TACTICAL AIRCRAFT 163
Far East
53 DIVISIONS plus 1 CORPS
TACTICAL AIRCRAFT 1,750
INCLUDES FORCES LOCATED IN MONGOLIA

As of 1 January 1986

FIGURE IV-1

ets maintain a significant military presence in Africa, Southeast Asia, and Cuba, in addition to a substantial fighting force in Afghanistan. Further, they provide security assistance on an extensive scale and use surrogate forces to project their military power.

US Posture

The effectiveness of the US strategy depends not only on a system of forward-deployed forces but also on close cooperation with regional allies. In addition to their own military forces, these allies may also provide basing and staging facilities, overflight rights, ashore pre-positioning sites, and host-nation (HNS) support to assist US forces. Figure IV-2 shows the current deployment of major US ground, air, and naval forces. The majority of the remaining US Active Component and virtually all Reserve Component forces are located in the CONUS. These latter forces provide the flexibility to shift forces as required by various contingencies or world developments.

REGIONAL BALANCES

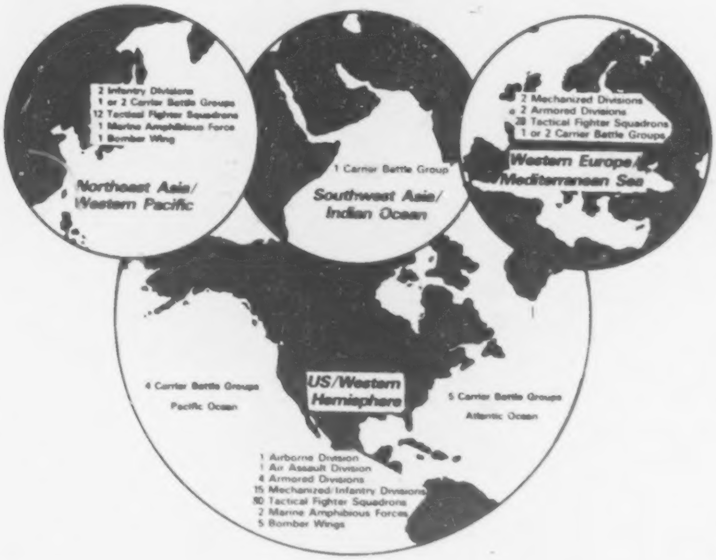
NATO and Western Europe

Warsaw Pact conventional forces are being modernized at a pace that threatens to overcome NATO's longstanding advantages in quality. The United States and its NATO Allies have made significant improvements in their conventional capabilities, but strong and sustained efforts are still required to meet Alliance force goals.

The Balance in Europe

The Warsaw Pact's military strength is far in excess of that required to defend its territory. The Warsaw Pact's conventional forces are organized, equipped, and trained to conduct offensive operations, and its doctrine and exercises continue to emphasize surprise and large-scale penetration of NATO territory. The major forces facing NATO are depicted in Figure IV-3, with arrows showing where they would proba-

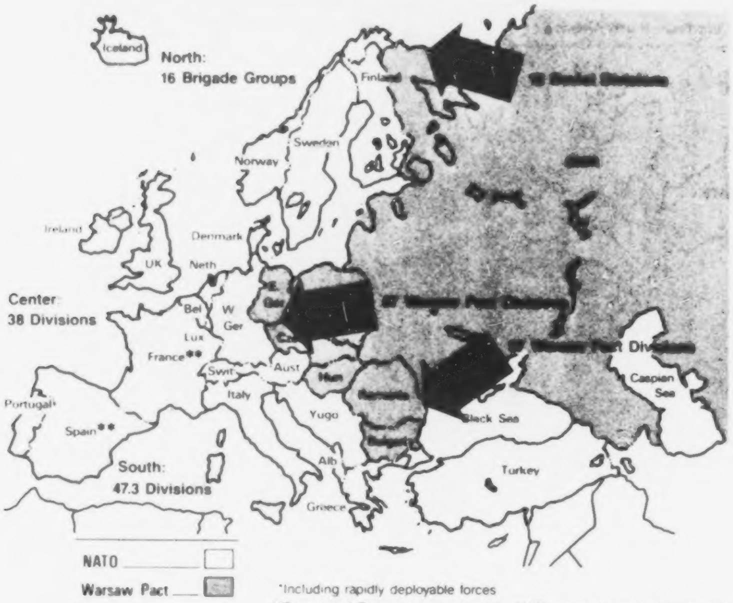
US Conventional Forces


2 Infantry Divisions
1 or 2 Carrier Battle Groups
12 Tactical Fighter Squadrons
1 Marine Amphibious Force
1 Bomber Wing
Northeast Asia/
Western Pacific
1 Carrier Battle Group
Southwest Asia/
Indian Ocean
2 Mechanized Divisions
2 Armored Divisions
28 Tactical Fighter Squadrons
1 or 2 Carrier Battle Groups
Western Europe/
Mediterranean Sea
4 Carrier Battle Groups
Pacific Ocean
US/Western
Hemisphere
5 Carrier Battle Groups
Atlantic Ocean
1 Airborne Division
1 Air Assault Division
4 Armored Divisions
15 Mechanized/Infantry Divisions
90 Tactical Fighter Squadrons
2 Marine Amphibious Forces
5 Bomber Wings

As of 1 January 1986

FIGURE IV-2

Western Europe, NATO, and the Warsaw Pact*


Iceland
North:
16 Brigade Groups
Finland
Sweden
Norway
Ireland
Denmark
UK
Neth
Center:
38 Divisions
Bel
W Ger
Lux
France**
Switz
Aust
Italy
Yugo
Alb
Greece
Portugal
Spain**
South:
47.3 Divisions
Black Sea
Caspian Sea
Turkey
NATO
Warsaw Pact

*Including rapidly deployable forces
**France and Spain are not part of the NATO integrated military command structure

As of 1 January 1986

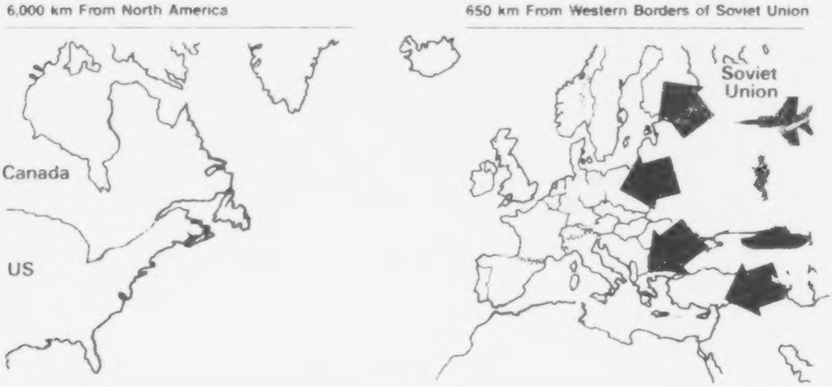
FIGURE IV-3

bly concentrate their attacks. The Warsaw Pact could be reinforced with larger numbers and in a shorter time than NATO, particularly if there were little tactical warning. Figure IV-4 illustrates this Warsaw Pact advantage. In the past year, the capability of US combat forces in Europe to support military operations has continued to improve. Corresponding Soviet and Warsaw Pact improvements, however, require continued increases to maintain a viable deterrence posture within NATO. One critical challenge confronting US European Command (USEUCOM) and NATO is the congressionally mandated European troop strength (ETS) ceiling and its impact on force structure, modernization, readiness, and sustainability. The abolishment of the ETS ceiling as an arbitrary manpower ceiling and the establishment of a force structure based upon geostrategic principles and the ever-increasing threat would enhance NATO's deterrence capabilities.

The ability to rapidly reinforce forward-deployed US forces is also a key factor in supporting NATO commitments. Comparisons of NATO and Warsaw Pact forces in Europe are displayed in Figures IV-5 through IV-8.

Trends in ground forces continue to favor the Warsaw Pact. The Warsaw Pact advantage in tanks continues at more than two-to-one and the advantage in artillery, mortars, and rocket systems is more than that ratio. The Warsaw Pact maintains large numbers of air defense systems in Europe, and the ratio of these systems to NATO tactical air forces is increasing.

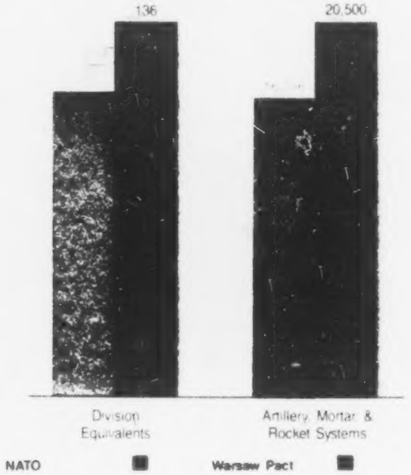
NATO–Warsaw Pact Reinforcement


6,000 km From North America
650 km From Western Borders of Soviet Union
Canada
US
Soviet Union

As of 1 January 1986

FIGURE IV-4

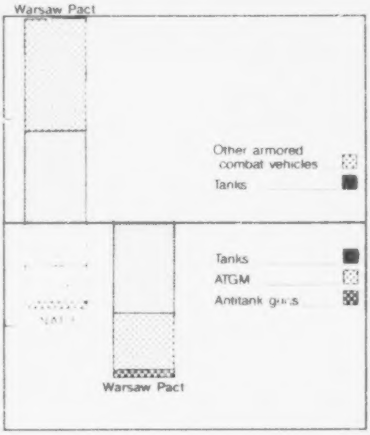
NATO—Warsaw Pact Ground Force Balance



As of 1 January 1986

FIGURE IV-5

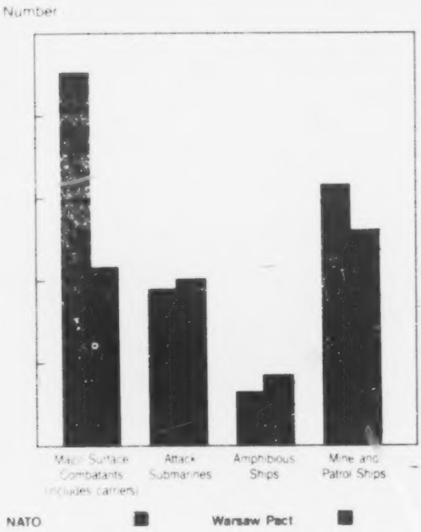
NATO–Warsaw Pact Armor and Antiarmor Systems



As of 1 January 1986

FIGURE IV-6

NATO—Warsaw Pact Naval Force Balance

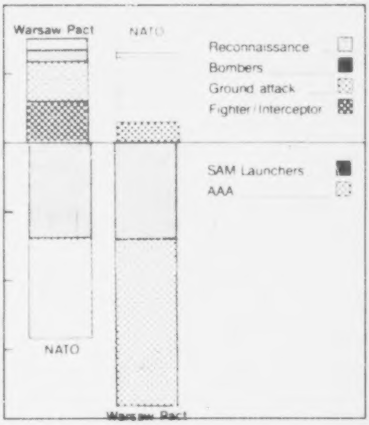


As of 1 January 1986 *FIGURE IV-7*

NATO continues to have an advantage over the Warsaw Pact in numbers of tactical air-to-ground systems, but still faces a significant numerical disadvantage in air-to-air fighters. The qualitative advantage of NATO's tactical air weapon systems helps offset imbalances in total numbers of aircraft. However, aircraft survivability remains a major NATO concern. The lack of a NATO identification system (NIS), which includes an improved identification friend or foe (IFF) capability, hampers the employment of these aircraft. The development of a common IFF system has recently been approved; however, until the equipment is fielded, air space control remains a difficult problem. Also, the Warsaw Pact has significantly more hardened shelters for its aircraft than does NATO. Actions continue within the Alliance to expedite the aircraft shelter program.

Modernization programs have allowed NATO naval forces to maintain an overall advantage over the Warsaw Pact; nevertheless, Soviet naval forces remain capable of threatening US and allied forces operating in the maritime approaches to Europe and of posing a threat to reinforcement and resupply shipping in the Atlantic Ocean.

NATO–Warsaw Pact Air and Air Defense Systems



As of 1 January 1986 *FIGURE IV-8*

The successful defense of the NATO Alliance remains highly sensitive to the time available for mobilization, early decisions by NATO political authorities, force allocations, en route survivability, and the adequacy of munitions and other consumables. Critical to the ability of US reinforcements to reach the European theater will be the availability and sustainability of such bases as Iceland and the Azores along with the ability to protect and defend the Atlantic, Caribbean, and Mediterranean sea lines of communication (SLOCs).

Middle East and Southwest Asia

The security of the Middle East and Southwest Asia is vital to the economic health of the free world and, consequently, to the security of the United States. Regional stability, Free World access to oil resources, and the limitation of Soviet influence remain important US objectives. Figure IV-9 identifies current areas of concern.

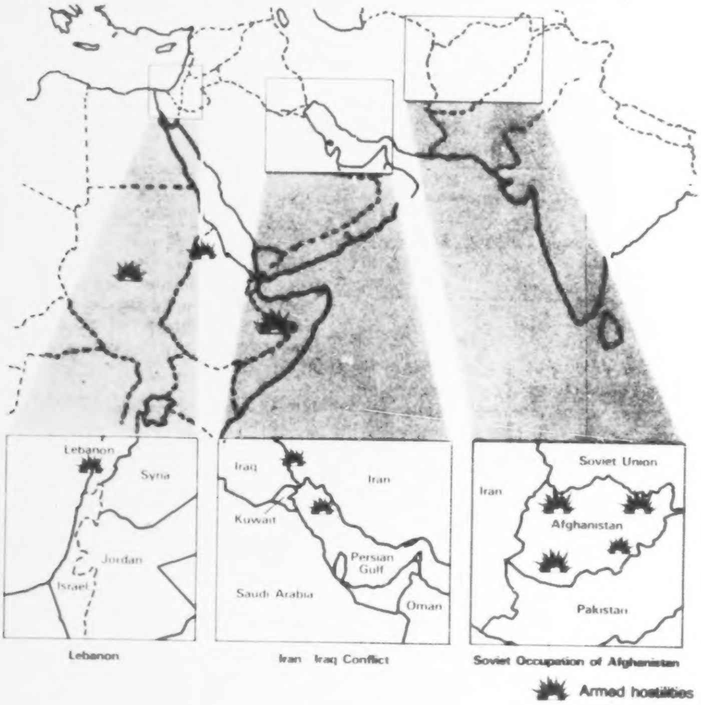
Regional Stability

Threats to stability and the free flow of oil within this region are numerous and complex. Local disputes continue to draw regional factions into armed conflict, and terrorist actions remain a significant challenge. In the Persian Gulf area, the Iran-Iraq war continues. In Afghanistan, the Soviets maintain a strong, apparently permanent, military presence with which they exert pressure on other nations in the region.

Soviet Activities

The Soviet Union has undertaken significant military operations in the region. Large-scale Soviet military aid programs in the Middle East and Southwest Asia region continue as the Soviets maintain a constant presence through port visits, basing facilities, and deployment of over 8,000 advisors. In addition,

Areas of Concern
Middle East–Southwest Asia


Lebanon
Syria
Jordan
Israel
Iraq
Iran
Kuwait
Persian Gulf
Saudi Arabia
Oman
Iran
Soviet Union
Afghanistan
Pakistan
Armed hostilities

Lebanon

Iran-Iraq Conflict

Soviet Occupation of Afghanistan

As of 1 January 1986

FIGURE IV-9

the Soviets deploy a naval squadron of 20-30 ships in the Indian Ocean on a permanent basis.

US Role

The United States participates in a number of programs to promote peace and stability in the region. Security assistance is provided to friendly nations in order to build up their capabilities to protect themselves and to help deter intraregional conflict. The United States continues to maintain naval forces in the Persian Gulf and Arabian Sea, and US ground and air forces periodically conduct exercises with nations of the region. US allies, such as France and the United Kingdom, also provide security assistance and a limited military presence. The Commander in Chief, US Central Command (USCINCCENT) is responsible for coordinating all US military activities in the Southwest Asia region. A forward headquarters element of US Central Command (USCENTCOM) continues to operate from a US Navy ship in the Persian Gulf area. Figure IV-10 shows selected forces present in the Middle East-Southwest Asia region.

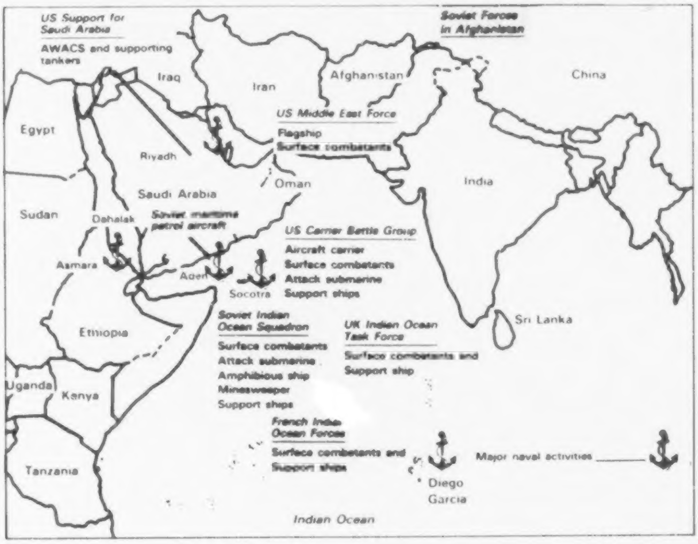
Pacific

The Pacific continues to be an area of increasing importance to the United States. US security interests in the Asian-Pacific region include the strengthening of collective defense with allies, promotion of regional stability, maintenance of strong economic ties, and free access to and within the area.

The Balance in the Pacific

The increasing ability of the Soviet Union to project military forces into the Pacific region poses a significant threat to US and allied interests. Figure IV-11 shows the disposition of selected military forces in the region. Strong Soviet land forces remain on the Sino-Soviet border, and a large Soviet naval force is available for employment throughout the Pacific. The continued improvement of Soviet forces and the bas-

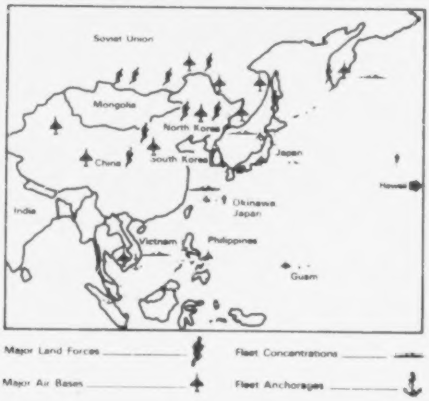
Allied–Soviet Presence in Southwest Asia


US Support for Saudi Arabia
AWACS and supporting tankers
Soviet Forces in Afghanistan
Iraq
Iran
Afghanistan
China
Egypt
US Middle East Force
Flagship
Surface combatants
Riyadh
Oman
India
Saudi Arabia
Sudan
Dahalak
Soviet maritime patrol aircraft
US Carrier Battle Group
Aircraft carrier
Surface combatants
Attack submarine
Support ships
Asmara
Aden
Socotra
Soviet Indian Ocean Squadron
Surface combatants
Attack submarine
Amphibious ship
Minesweeper
Support ships
UK Indian Ocean Task Force
Surface combatants and
Support ship
Sri Lanka
Ethiopia
Uganda
Kenya
French Indian Ocean Forces
Surface combatants and
Support ships
Major naval activities
Diego Garcia
Tanzania
Indian Ocean

As of 1 January 1986

FIGURE IV-10

Major Power Balance in East Asia and the Pacific



As of 1 January 1986 *FIGURE IV-11*

ing of missiles in the Far East Military District increase the threat to Japan and other Northeast Asian nations. The continuing development of the first true Soviet naval and air facility outside the Warsaw Pact at Cam Ranh Bay, Vietnam has improved the Soviet ability to interdict Pacific and Indian Ocean SLOCs. The North Korean Armed Forces continue to prepare for a military reunification of the Korean Peninsula should circumstances prove favorable. North Korea, supported by the Soviets, continues to modernize its armed forces. Recent delivery of modern fighter aircraft indicates the Soviets are providing the means to upgrade North Korean air capabilities. In Southeast Asia, Vietnam's armed forces are larger than the total armed forces of the Association of Southeast Asia Nations (ASEAN) States and remain the primary destabilizing influence in that region. Soviet economic and military support has allowed Vietnam to improve its military capabilities. Nearly 150,000 Vietnamese troops currently occupy Cambodia, threatening the security of Thailand and creating the potential for a conflict with wider dimensions.

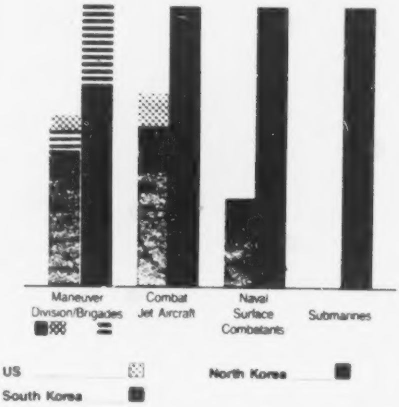
US, Allied, and Friendly Nations' Capabilities

There is a common interest among the United States and its Asian-Pacific allies and friends to promote peace and stability in the region. Because of the growing threat, close defense cooperation and collective security arrangements are essential. The United States has bilateral security agreements with Japan, the Republic of Korea (ROK), Thailand, and the Philippines and multilateral defense agreements with Australia and New Zealand.

The Australia, New Zealand, United States (ANZUS) organization continues to provide a framework for allied cooperation in the Western and Southern Pacific, current differences with the New Zealand Government notwithstanding.

The well-trained ROK forces are becoming increasingly self-sufficient in their capability to defend against aggression from the north, but South Korea is still dependent upon US support, both operationally and through pre-positioned war reserve materiel, to deter or counter an attack. The United States continues to deploy an Army division and combat air forces within the country, and US naval units in the Western Pacific can respond quickly if needed. Figure IV-12 compares the major forces on the Korean Peninsula. The ROK provides extensive support to

Comparison of US–South Korean Forces and North Korean Forces



*US carrier battle group, including SSN, on station within 96 hours

As of 1 January 1986 *FIGURE IV-12*

forward based US units and the forces of the two countries are integrated into a single command structure, the Combined Forces Command. Combined US ROK military training is conducted through day to day activities and annual exercises. Major exercises, such as TEAM SPIRIT, demonstrate allied cooperation and US reinforcement potential.

Japan remains a cornerstone of regional security by virtue of its strategic location, economic strength, and self defense capability. The Japan Self Defense Forces are well equipped and well trained, but they continue to lack the logistic support capability necessary for sustained combat operations. Japan's defense budgets are increasing in recognition of growing threats and acknowledgement of responsibility for conducting defense of its SLOCs out to 1,000nm. US bases in Japan play a vital role in complementing Japan's defenses and providing operational and logistic bases for US regional security efforts.

Building a stable relationship and cooperating in China's modernization is an important element of US strategy for the region. The PRC is gradually improving the defensive capabilities it considers critical to maintain its security, in conjunction with its national modernization. US PRC military cooperation can enhance China's security and promote a stable regional environment. Continuing the US role in China's modernization and supporting China's gradual incorporation into regional and world interaction strengthens the credibility and presence of the United States.

The United States maintains a close and longstanding bilateral defense relationship with the Philippines and has strategically important air and naval bases there. Political and economic instability and active insurgencies will continue to impact adversely on Philippine security and pose complex challenges to the Philippine Armed Forces.

Latin America

Latin America, particularly the Caribbean Basin and Panama Canal, is a vital security concern of the United States. Over 50 percent of US trade and many strategic materials transit Caribbean waters. Substantial NATO reinforcements and materiel would use these SLOCs in the event of a conflict in Europe. US access to oil in the region is important in peacetime and would be vital in wartime. US and allied interests continue to be threatened by insurgencies in the region and growing Soviet and Cuban efforts to exploit instability there. The impact of illicit narcotics presents a significant threat to the United States and Latin American countries. The flow of illegal drugs has been clearly related to the illegal flow of weapons for at least one insurgent group supported by Cuba and Nicaragua, as well as support for terrorism.

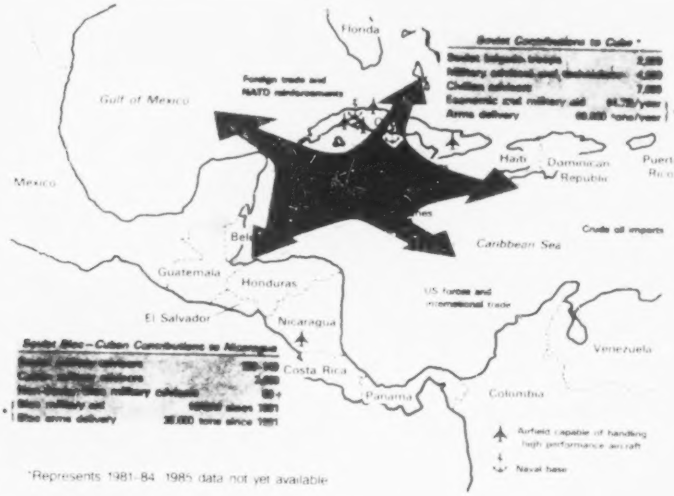
The Balance in Latin America

The Soviet Union provides Cuba extensive financial support and has a combat brigade, a signals intelligence (SIGINT) facility, advisors and technicians there. The Soviets also provide military aid to selected countries in the region, either directly or using client-states such as Cuba, East European nations, or North Korea as conduits.

Cuba continues to have the largest army in the Caribbean Basin, and is growing steadily in air and naval strength. Bolstered by Soviet aid, Cuba supports a number of insurgent movements by providing training, advisors and technicians, and substantial amounts of military equipment. Cuba's military strength and aggressive policies would provide a direct threat to US SLOCs in a global conflict as shown in Figure IV-13.

While Cuba is an important base for Soviet involvement in the Western Hemisphere, Nicaragua provides an opportunity to establish a center of Soviet influence in Central America that can threaten recent democratic trends, erode US influence in the region, and divert US resources from areas of greater strategic value to the Soviets. Nicaragua, following the pattern set 25 years ago in Cuba, is a regional sanctuary and prime source for spreading insurgency throughout Central America. With Soviet and Cuban assistance, the Nicaraguan armed forces have expanded over eightfold in the last 5 years. This inordinate growth in conventional capability has upset the balance of power, decreased regional stability, and provides a secure base for the support of subversive activities throughout the region (Figure IV-14). The consolidation of Sandinista power supports an expanding Soviet penetration into Latin America that could conceivably result in additional Soviet facilities in proximity to the United States. Also, it has become apparent that there is increased Cuban, Soviet, and North Korean influence in Guyana. The presence of Soviet surface action groups in the Caribbean along with

Soviet—Cuban Presence in Latin America


Florida
Soviet Contributions to Cuba *
Civilian advisers
Economic and military aid
Arms delivery
tons/year
Foreign trade and NATO reinforcements
Gulf of Mexico
Mexico
Haiti
Dominican Republic
Puerto Rico
Crude oil imports
Caribbean Sea
Guatemala
Honduras
US forces and international trade
El Salvador
Nicaragua
Soviet Bloc—Cuban Contributions to Nicaragua
Bloc arms delivery
tons since 1981
Costa Rica
Venezuela
Panama
Colombia
Airfield capable of handling high performance aircraft
Naval base

*Represents 1981-84. 1985 data not yet available

As of 1 January 1986 *FIGURE IV-13*

Conventional Forces in Central America

	Costa Rica	*Nicaragua*	*Honduras*
Personnel (Thousands)	8	119*	22**
Tanks	0	150	0
Armored Vehicles	0	200	99
Artillery (53mm & up)	0	146	24
Air Defense Artillery	0	200	30
Aircraft	10	67***	101

* Includes active duty forces, inactive militia and reserves as well as National Police

** Includes 5,000 police, 2,000 Air Force and 600-700 Navy

*** Includes transportation aircraft that perform militarily associated missions

As of 1 January 1986 *FIGURE IV-14*

continued deployments of Soviet long range naval reconnaissance and antisubmarine warfare aircraft to Cuba and Angola remain a concern.

The United States and its Latin American allies have a common interest in promoting regional peace and stability. With the expanding Soviet, Cuban, and Nicaraguan roles in promoting low-intensity conflict, US and allied programs that focus on the enhancement and application of military capabilities are essential to promoting regional self-sufficiency. Training in areas such as civil defense, civic action, internal security, psychological operations, and combat engineering and medicine are counters to low-intensity threats. Military assistance has been effective in helping countries such as El Salvador cope with externally supported insurgencies.

In addition, exercises are conducted with friendly armed forces of the region to improve combined capabilities for defense and host-country self-sufficiency. The forward deployment of US forces in Panama and periodic force deployments emphasize the US commitment to the region.

MARITIME BALANCE

The ability to deploy and reinforce US forces in support of overseas interests and ensure the uninterrupted flow of strategic materials is an essential element of US military power. For these reasons, the US Navy maintains forces capable of seeking out and destroying enemy naval forces, maintaining local air and sea control, projecting forces ashore, supporting ground forces, and transporting forces and supplies. The maritime balance, therefore, must be viewed from a global perspective.

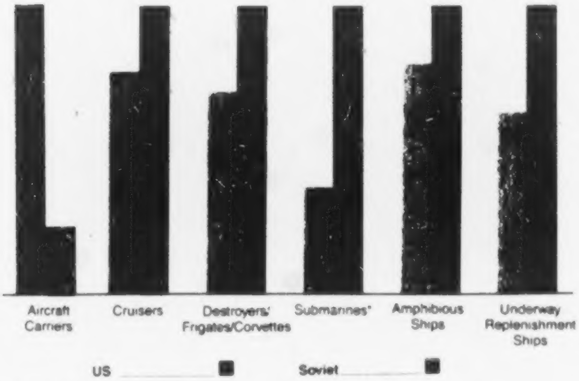
The Soviet Navy continues to evolve into a balanced force capable of performing sea control missions in waters contiguous to the USSR and sea denial operations. However, the open-ocean effectiveness of Soviet naval forces will continue to be affected by geographic constraints. The four Soviet fleets — Northern, Baltic, Black Sea, and Pacific — are widely separated and to varying degrees must transit choke points to reach open ocean.

Figures IV-15 to IV-18 compare selected US and Soviet naval trends. The Soviets are introducing nuclear-powered warships with greater firepower and endurance into their surface fleet. The introduction of a larger vertical/short takeoff and landing (VSTOL) carrier in the early 1990s will be a significant improvement over the KIEV-class and will enhance their capability for open-ocean operations.

Soviet cruisers and guided missile destroyers joining the fleet have advanced antiship, antisubmarine, and antiair weapon systems. The expansion and modernization of the general purpose submarine force include the addition of new classes of nuclear-powered attack submarines (SSNs) and guided missile submarines (SSGNs). Improved Soviet Naval Aviation (SNA) land-based bombers pose an increasing threat to US and allied surface ships.

US Navy surface forces still possess a significant advantage over the Soviet Navy in open-ocean antisurface warfare. US land-based air can also provide assistance in defending the SLOCs. P-3, B-52, and other aircraft, with the capability to deliver mines and

US–Soviet Principal Naval Forces

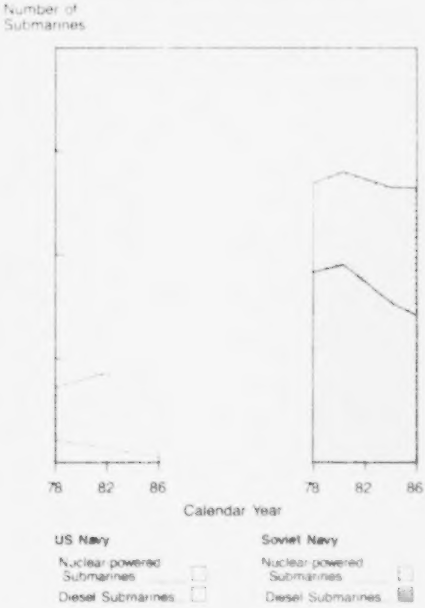


*Excluding ballistic missile units

As of 1 January 1986

FIGURE IV-15

General Purpose Submarines*



* Excluding ballistic missile units

As of 1 January 1986 *FIGURE IV-16*

launch HARPOON antiship missiles, can now provide added support against enemy surface targets. Land-based tankers and fighters operating in conjunction with AWACS provide additional capability against the SNA threat.

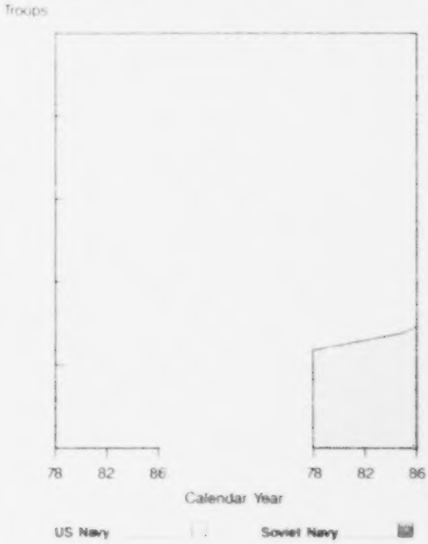
US naval capabilities will continue to outpace the Soviets. The US Navy will maintain its open ocean superiority and continue to improve its capability to operate in high threat areas while performing missions in support of allies and forces ashore.

COMPONENT FORCES

Ground Forces

For both deterrence and warfighting, US ground component forces provide an essential element of our

US and Soviet Amphibious Lift Capability*

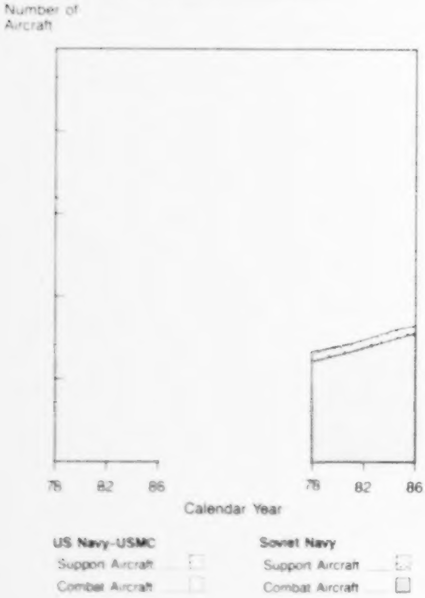


* Ships with a range in excess of 500nm (the Soviets have a significant lift capability within their coastal waters)

As of 1 January 1986 *FIGURE IV-17*

M-1 ABRAMS MAIN BATTLE TANK

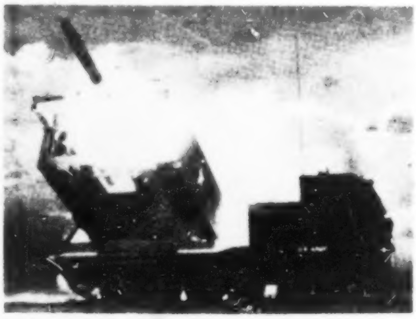
US and Soviet Naval Aviation Aircraft



As of 1 January 1986 FIGURE IV-18

M-3 BRADLEY CAVALRY FIGHTING VEHICLE

national power. The Army has enhanced deterrence by fielding forces more capable of defending US interests across the entire spectrum of conflict. The spirit and readiness of Army organizations, combined with the improving quality of weapon systems, are visible symbols of the Army's increased warfighting capability. With a clear view of the Soviet Union's relentless force modernization, and anchored on a comprehensive operational doctrine, the Army is continuing to build a capability to exploit the national strengths of technological advantage and the quality of our magnificent young men and women.



MULTIPLE ROCKET LAUNCH SYSTEM

The Soviets continue to pursue an aggressive modernization program for all systems employed in support of land combat. Many of their weapon system production rates far exceed those of comparable US systems. Their tank fleet has acquired improved armor and fire control equipment, as well as more lethal ammunition. Other Soviet combat vehicles also evidence improvements in lethality and self-protection. The Soviet Union is also rapidly fielding new and more capable field artillery systems. To support ground maneuver, the Soviets are expanding their numbers and significantly improving the capabilities of their close support fixed wing and attack helicopters. In general, Soviet modernization initiatives seek to field a force capable of rapid execution of a massive combined arms offensive operation against NATO.

To meet the global challenges presented by Soviet and other potential adversaries, the Army has sought to make optimum use of constrained manpower and fiscal resources. Major elements of the Army modernization program are outlined in Figure IV-19. The Army is completing the redesign of its

UH-60 BLACKHAWK

Ground Force Systems Modernization

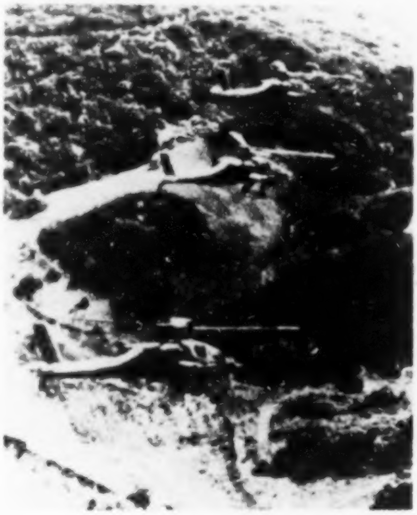
System	*Description*
ABRAMS Tank	Main battle tank
M60A3 Tank	Main battle tank product improvement program
BRADLEY Fighting Vehicles	Infantry and cavalry fighting vehicles
UH-60 BLACKHAWK	Utility helicopter
AH-64 APACHE	Advanced attack helicopter
PATRIOT	High and medium altitude surface-to-air missile
Multiple-Launch Rocket System	Self-propelled, tracked multiple-rocket launcher/loader
Army-TACMS	Conventional ballistic missile
Precision Guided Artillery Munitions and Submunitions	Family of PGM's
JSTARS	Airborne radar battlefield management and target location system
RPV	Unattended air vehicle sensor platform
Guard Rail	Signals intelligence collection
ASAS, TACIES, EPDS, MSE, PJM	C^3I modernization programs

As of 1 January 1986 *FIGURE IV-19*

heavy, light, and special operations forces to succeed in contingency and low intensity conflicts, as well as to assure success in high-intensity combat against the Warsaw Pact. With the 1986 procurements, the Army has completed funding about one-half of the modernization of combat systems initiated in the 1970s (ABRAMS tank, BRADLEY Fighting Vehicle, APACHE helicopter, PATRIOT air defense system, BLACKHAWK helicopter, Multiple Launch Rocket System, and related systems). Significant milestones in 1986 include:

- Fielding the first AH-64 APACHE battalion.
- Beginning to equip US Army forces in Europe with the M1A1 ABRAMS tank with the 120mm gun and an overpressure NBC protective system.
- Accelerating the modernization of the Reserve Components (RC) by fielding M60A3 or ABRAMS tank, and
- Activation of the 6th Infantry Division (Light) in the Active Component (AC) along with the 29th Infantry Division (Light) in the Army National Guard.

The Army must now complete its present modernization program and begin the equally important task of exploiting advanced sensor, data fusion and distribution, and smart munition technologies necessary to extend the battle beyond the engaged forces. This capability to conduct operations in depth is essential to



AH-64 APACHE — TANK KILLERS

success in combat against a sophisticated and numerically superior foe who has the advantage of choosing the time, place, and manner of beginning hostilities. Moreover, the harnessing of advanced technologies can contribute to reducing the degree to which deterrence and defense rely on nuclear weapons.

Combat Air Forces

The United States is continuing to improve its combat air forces through the procurement of new systems, modification of existing capabilities and enhancing sustainability. The advantage currently held by the United States will narrow when the Soviets deliver new aircraft, the FLANKER (Su 27) and FULCRUM (MiG 29), to operational units in significant numbers. These aircraft will feature improvements in maneuverability, fire control, airframe construction, electronics, armament, and range payload capability. The deployment of the Soviet MAINSTAY airborne warning and control aircraft and tanker aircraft for theater support will further increase the effectiveness of Soviet combat aircraft.

Figure IV 20 displays US and Soviet combat aircraft by category, and Figure IV 21 compares tactical aircraft production rates. These production figures include both dual role and single role Soviet and US aircraft.

The US Air Force continues its growth toward a 40 tactical fighter wing (TFW) equivalent force struc

US ARMY M 102 HOWITZER

US ARMY COMBAT SOLDIERS
IN WINTER CAMOUFLAGE

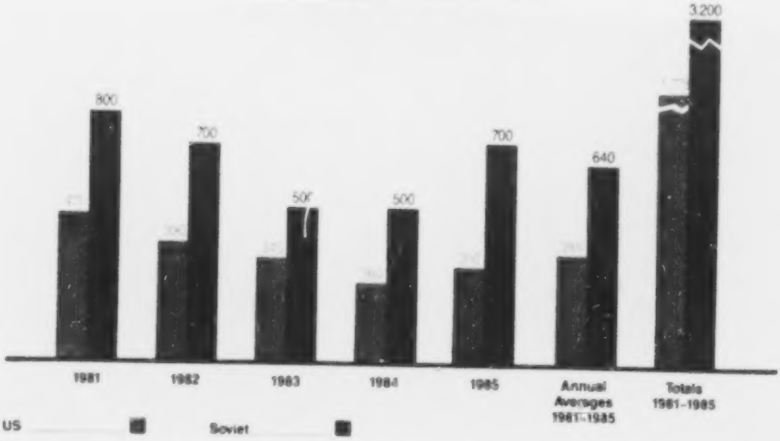
Current US–Soviet Combat Aircraft

Category	*US Aircraft*	*USSR Aircraft*
Air-to-Surface	B-1B, B-52, FB-111	BACKFIRE, BEAR, BISON, BADGER, BLINDER
	F-111, A-6	FENCER
	F-4, A-7, A-4, F / A-18, F-16	FLOGGER, FISHBED, FITTER
	AV-8	FORGER
	A-10	FROGFOOT
Air-to-Air	F-15, F-14, F-4	FLOGGER, FOXBAT, FOXHOUND, FIDDLER, FLANKER
	F-16, F / A-18	FULCRUM, FISHBED, FLAGON, FIREBAR
RECCE / EW / AWACS	RF-4, SR-71, F-14 TARPS	FITTER, FOXBAT, FISHBED
	U-2, TR-1	
	RC-135	BEAR, BLINDER
	EF-111, EA-6, EA-3	FENCER, BREWER, BADGER
	E-3A, E-2, EC-130	MAINSTAY, MOSS, CUB

As of 1 January 1986

FIGURE IV-20

US–Soviet Annual Production of Tactical Combat Aircraft*



*Includes interceptor aircraft for strategic defense, trainers, and ASW aircraft

As of 1 January 1986

FIGURE IV-21

ture and should reach approximately 39 TFWs by FY 1991. Although the rate of growth is not as rapid as originally planned, the current inventory will be increased by approximately three TFWs, and significant modernization will accompany this growth. For example, the fighter squadron deployed in Iceland has modernized from F-4Es to F-15Cs with a corresponding 50 percent increase in aircraft; the first squadron of F-16s has been established at Misawa AB, Japan, with a second squadron to follow; two squadrons of F-16s will replace two squadrons of F-4Es at Ramstein AB, Germany; the Air National Guard continues to receive F-15s and additional F-16s. In addition, the current force will be improved substantially through engine modification programs, increased air-to-air missile self-protection capabilities, and upgraded defensive systems for most tactical aircraft. Additional procurement of AIM-7M radar missiles and AIM-9M heat-seeking missiles will add significantly to the US capability for air-to-air combat. Additionally, the availability of LANTIRN navigation pods will enhance the ability of tactical air forces to deliver ordnance on target during night and under-the-weather operations. While conventional capabilities continue to improve, funding constraints have kept combat rescue from keeping pace with other forces.

F-15

F-16

LANTIRN ON F-16B

B-1B MULTI-ROLE
LONG-RANGE COMBAT AIRCRAFT

COMBAT RESCUE

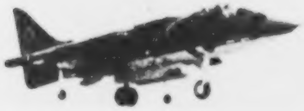
Strategic air forces continue to play a role in conventional operations. Many SAC B-52s have the capability to provide conventional support from CONUS or forward bases. These modified aircraft can carry a full range of gravity bombs, naval mines, and HARPOON antiship missiles. Currently, all non-ALCM configured B-52Gs will relinquish their Single Integrated Operational Plan (SIOP) commitment in the late 1980's. Plans call for dedicating these assets to a conventional support role. Additionally, B-1Bs will be tasked to support conventional operations. The B-1B will provide new employment options to deliver conventional weapons and has an improved all-weather, day-night capability over the B-52.

KC-10 MULTI-ROLE CARGO-TANKER

In-flight refueling by the KC-10 and KC-135 enhances the effectiveness and flexibility of US and allied aircraft. This capability allows tactical combat aircraft to carry maximum payloads and employ optimum tactics. The closure time of reinforcing forces is also reduced by permitting nonstop transit to forward operating locations. In addition, timely aerial refueling extends the loiter time of surveillance and reconnaissance aircraft allowing more efficient use of these assets.

The primary mission of the KC-135 fleet remains support of the SIOP; however, these assets must also provide support to theater forces and conventional deployment and employment operations. To help overcome the refueling shortfall, Active and Reserve KC-135s are being fitted with newer, more efficient engines. Acquisition of the KC-10 also aids in alleviating the refueling/mobility shortfall. However, the requirement to provide refueling for conventional mobility and combat forces continues to expand.

F-15 AIR REFUELING



USMC AV-8B HARRIER

The US Marine Corps continues to modernize its tactical air systems, air defense weapons, and airspace command and control systems. Significant improvements will result from further production of the F/A-18 and continued expansion of the AV-8B inventory to improve light attack forces. By FY 1987, this modernization will include the transition of the first six F-4 squadrons to F/A-18s, the first A-4M squadron to AV-8Bs, and two AV-8A/C squadrons to AV-8Bs. Marine Corps air defense is being improved by adding HAWK missile units. The LASER MAVERICK, STINGER POST, HELLFIRE missiles, and GATOR mines will also add to the improved capabilities of Marine aviation and air defense elements.

The Navy's tactical aviation force is expanding to support a goal of 15 aircraft carrier groups. The 14th carrier air wing is scheduled to be activated in FY 1987. The dual-mission F/A-18 has been introduced to the fleet, and 5 of 26 programmed Navy squadrons have been established. By 1987, the Navy will have 10 Active F/A-18 squadrons. Modernization programs are under way to upgrade the F-14A, its PHOENIX missile system, and the A-6E to counter the threat of the 1990s. In FY 1987, the Naval Air Reserve will continue its modernization program. F-14A deliveries will commence to the last two fighter squadrons, attack squadrons will have completed transitioning to A-7Es; and integration of the F/A-18 will continue with a second attack squadron transitioning by the end of the fiscal year.

A-10 CLOSE AIR SUPPORT AIRCRAFT

USN F/A-18

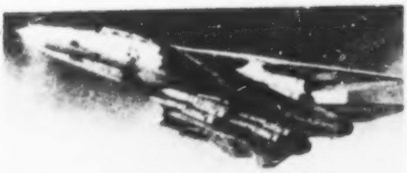
USN E-2C HAWKEYE AIRBORNE
EARLY WARNING (AEW) AIRCRAFT

USN — S-3A VIKING
ANTISUBMARINE (ASW) AIRCRAFT

Naval Forces

The US Navy has embarked on an important shipbuilding program in response to the buildup and modernization of Soviet naval forces and requirements of US military strategy. The key long-term goals of the Navy's 600-ship force are 15 Carrier Battle Groups, 4 Battleship Surface Action Groups, 100 SSNs, 10 Underway Replenishment Groups, 14 Mine Countermeasures ships, and amphibious ships sufficient to lift the assault echelons of a Marine Amphibious Force (MAF) plus a Marine Amphibious Brigade (MAB). Figure IV-22 outlines the FY 1987 shipbuilding program.

USN A-6E INTRUDER
ALL-WEATHER ATTACK AIRCRAFT



USN F-14 TOMCAT

This modernization program is most dramatically reflected in the addition of major surface combatants. USS THEODORE ROOSEVELT (CVN-71) is being fitted out and is scheduled for delivery in 1986 with the USS ABRAHAM LINCOLN (CVN-72) and USS GEORGE WASHINGTON (CVN-73) to follow. The battleships NEW JERSEY and IOWA have been commissioned. The USS MISSOURI will be delivered in 1986 and USS WISCONSIN has been authorized for reactivation.

The AEGIS equipped guided missile cruisers USS YORKTOWN (CG-48) and USS VINCENNES (CG-

US Naval Shipbuilding Program

Category/Class	*FY87*	*FY88*	*FY89*	*FY90*	*FY91*	*TOTAL*
Ballistic Missile Submarines	1	1	1	1	1	5
Nuclear-powered Attack Submarines	3	3	4	4	3	17
Aircraft Carriers	–	–	–	–	–	–
Cruisers	2	2	2	2	–	8
Destroyers	3	3	3	3	5	17
Amphibious Ships	–	1	2	1	2	6
Mine Warfare Ships	8	4	4	–	–	16
Support Ships	7	6	5	9	9	36
Landing Craft (Air-cushion)	–	12	12	9	9	42
Conversions/Reactivations						
Battleship	1	–	–	–	–	1
Aircraft Carrier SLEP*	–	1	–	–	1	2
Landing Personnel Dock-4 SLEP*	–	–	1	3	3	7
Oiler (Jumbo)	1	1	1	2	–	5
Moored Training Ship (Conventional)	1	–	–	–	–	1
Auxiliary Crane Ship (Conventional)	2	2	2	–	–	6

* Service Life Extension Program

As of 1 January 1986

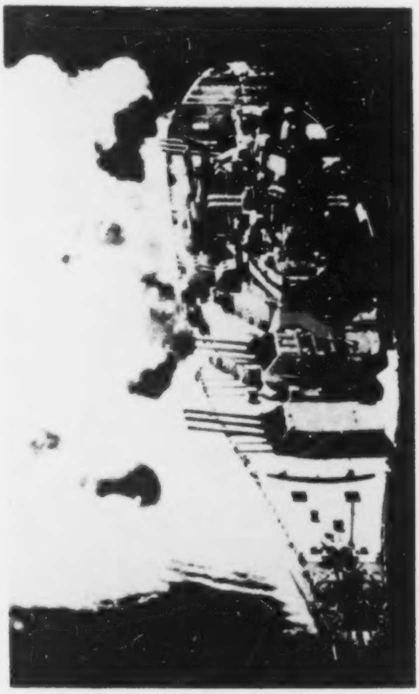
FIGURE IV-22

USS AMERICA WITH BATTLE GROUP

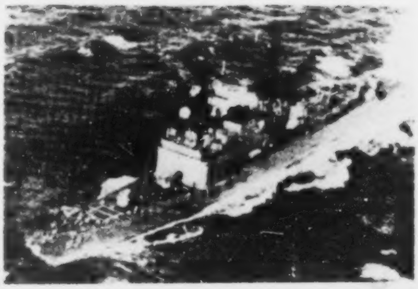
49) have recently joined the USS TICONDEROGA, already active with the fleet. Nineteen cruisers of this class have been authorized and appropriated by the Congress. A total of 27 ships of this class is planned. The ARLEIGH BURKE-class (DDG-51) guided missile destroyer incorporates the AEGIS system with a Vertical Launch System (VLS) that accommodates a variety of antiair and antisubmarine weapons and TOMAHAWK missiles. The lead ship was appropriated in FY 1986. Fleet introduction of the SH-60B LAMPS MK III helicopter, improved active sonar (AN/SQS-53C), improved tactical towed array (AN/SQR-19), and improved sensor processing and display will significantly enhance the ability to detect and prosecute enemy submarines.

The existing fleet is also being modernized. All 26 cruisers in the current inventory are receiving a longer range SAM and are receiving a faster, more tightly integrated computerized combat system, the New Threat Upgrade. Twenty-four of the 31 SPRUANCE-class destroyers will receive the VLS, in addition to backfit of the ASW systems described in the previous paragraph.

The LOS ANGELES-class submarine is quieter, faster, and more capable than earlier US nuclear attack submarines. Fourteen LOS ANGELES-class submarines will be authorized between FY 1987 and FY 1991. The follow-on SSN-21-class is being developed for the mid-1990s and beyond. This submarine will be faster, more heavily armed, and quieter than the LOS ANGELES-class and will have an increased capability for diving and operations under ice. ASW capability will also be strengthened through such



USS IOWA (BB-61)



USS HAYLER (DD-997)
SPRUANCE-CLASS DESTROYER

USS YORKTOWN (CG-48)
AEGIS GUIDED MISSILE CRUISER

planned programs as the surface towed array sonar system (SURTASS/TAGOS), update IV avionics for patrol aircraft, S-3A Weapon System Improvement Program, and the SH-60F CV inner-zone helicopter.

The Soviets have over 200,000 naval mines with the capability to plant them near SLOCs, choke points, and in key ocean and harbor areas. To counter this threat, more effective US mine warfare platforms, such as the AVENGER-class mine countermeasures ship (MCM-1), will soon enter the fleet. Fourteen MCM-1 vessels will be built. The first of 18 CARDINAL-class minesweeper hunter ships was appropriated in FY 1984 and four more were funded in FY 1986. The FY 1987 budget requests funds for five additional units.

TOMAHAWK
SURFACE-TO-SURFACE MISSILE (SSM)

USS LOS ANGELES (SSN-688)
NUCLEAR ATTACK SUBMARINE

Amphibious Forces

The Navy-Marine Corps amphibious team provides an effective combat force for deterrence and power projection. The mobility of the amphibious task force permits it to concentrate combat power when and where needed, to accomplish the assigned mission, and then move on to other tasks. The Marine air-ground task force (MAGTF) provides ground and air combat elements capable of conducting forcible entry to seize and control strategic choke points and lodgments as well as establishing and defending bases essential to a naval campaign. MAGTFs are organized and equipped primarily for amphibious operations, but are capable of responding to a wide variety of other contingencies.

AMPHIBIOUS ASSAULT LANDING

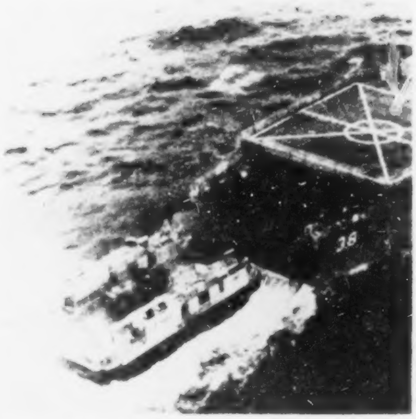
A MAF is the largest MAGTF for planning and is normally built around one division, an aircraft wing, and a force service support group. During FY 1986, the Marine Corps will maintain three MAFs within its active structure, one in the Western Pacific and one on each coast of the United States. Upon mobilization, the Selected Marine Corps Reserve will augment/reinforce the three Active MAFs, form a MAB headquarters, or act as a nucleus for reconstitution of a division wing team (DWT). If augmentation/reinforcement is not ordered, it would constitute a fully structured DWT.

The firepower available to the maneuver elements of the MAF has been improved through the increased lethality and range of the M198, 155mm towed howitzer. Further, each MAF's counterfire capability will be improved by the activation of the last of three target acquisition batteries by FY 1988. Each division's antiarmor capability is being significantly increased with the addition of a tube-launched, optically tracked, wire-guided missile (TOW) platoon to each infantry regiment. Commencing in FY 1988, the division's TOW assets will be organized into an antitank battalion to enhance tactical employment and to capitalize on supply and maintenance economies. Other antiarmor improvements include procurement of an improved light antitank weapon and improvements in the capability of the DRAGON antitank weapons in each infantry battalion.

USMC LIGHT ARMORED VEHICLE (LAV)

MARINES IN COLD WEATHER COMBAT GEAR

Amphibious assault capability is being improved by the replacement of older amphibious ships with the highly capable LHD-1 and LSD-41 (VAR) (cargo variant) ship. Ship-to-shore capability is being improved by the introduction of Landing Craft, Air Cushion (LCAC) and the Assault Amphibian Vehicle Service Life Extension Program (AAV SLEP). The LCAC can carry a 60-ton payload from an over-the-horizon launch to the beach at speeds in excess of 40 knots. Initial delivery of LCACs has already commenced. In addition, the AAV SLEP will extend the life of existing amphibians into the 1990s. Armored mobility and firepower on the ground will be improved with the fielding of the Light Armored Vehicle (LAV). The first two battalions have been activated and the third battalion is to be activated in 1986; a Reserve LAV battalion will be activated in 1987.



LANDING CRAFT, AIR-CUSHION (LCAC) VEHICLE

ASSAULT VEHICLES MOVING ASHORE

USMC CH-53E

The modernization of Marine airlift is centered on CH-53E heavy lift helicopters. The CH-53E lift capability permits the airlift of over 93 percent of a division's combat essential equipment. Figure IV-23 depicts major Marine Corps modernization programs.

Chemical Capabilities

The adequacy of the US chemical warfare (CW) posture remains a matter of grave concern. The Soviets continue to maintain the most significant capability in the world to employ chemical weapons. There is evidence that the Soviet Union has used lethal chemical agents against the people of Afghanistan and sponsored the use of these agents and toxins in Laos and Cambodia, despite the fact that it is a signatory to the 1925 Geneva Protocol. The United States, which is also a signatory to the Geneva Protocol, has a policy of no first use of chemical weapons. However, the United States has reserved the right to retaliate should the United States or its allies be attacked with these weapons.

Marine Corps Modernization

System	*Description*	*Status*
CH-53E	Heavy lift helicopter	Three squadrons operational
AV-8B	VSTOL attack aircraft	In production, one squadron operational
F/A-18	Fighter/attack aircraft	In production, 4 of 12 squadrons converted from F-4
AAV	Assault amphibian vehicle	Undergoing major upgrades and service life extension
LAV	Light armored vehicle	In production, operational
LCAC	Air-cushion landing craft	In production, operational FY 1986
MV-22	Vertical lift aircraft	In development

As of 1 January 1986

FIGURE IV-23

MARINES IN
CHEMICAL PROTECTIVE MASKS

USAF CHEMICAL DECONTAMINATION TEAMS

The United States has refrained from producing chemical weapons since 1969 in the hope that the Soviets would exercise similar restraint. The Soviet Union, however, has continued to develop its CW capabilities by a vigorous research and development effort, stockpiling large quantities of chemical agents, maintaining an extensive agent production capability, deploying chemical weapons with modern delivery capabilities, and training extensively in CW. Since the mid-1970s, the United States has attempted, with little progress, to negotiate an effective, verifiable chemical weapons arms control agreement with the Soviet Union. The United States has focused its CW efforts on defensive capabilities and the maintenance of a limited retaliatory capability.

US ARMY
CHEMICAL DETECTION TEAM

The United States has made some progress in its chemical defense program. Individual protective equipment is available to all Services, improved detection equipment has been fielded; fixed and portable collective protection systems are being procured. Research and development is under way to provide better equipment, to include medical pretreatments and antidotes. Figure IV-24 outlines the current US chemical defense posture. Chemical defense programs require continued strong support.

Despite improvements in defensive chemical programs, a defensive chemical posture is not enough. The aging US stockpile of present-day weapons is rapidly losing its deterrent value. The United States must have a credible CW retaliatory capability so the

US Chemical Warfare Protection Capabilities

Category	*Currently Used*	*Planned Improvements*
• Individual protection	• Protective mask • Protective overgarment	• Improved mask • Lightweight overgarments
[illegible]	[illegible]	• [illegible] • [illegible]
• Detection and warning	• Detection paper • Chemical agent alarm • Chemical agent detector kit	• Hand-held monitor • Unattended remote sensor • Point scanner
[illegible]	• [illegible] • [illegible]	[illegible]

As of 1 January 1986

FIGURE IV-24

Soviets will be forced to consider the consequences to their own forces if they initiate the use of CW. The majority of US chemical munitions can no longer be used effectively in combat. The most critical deficiency is the lack of a persistent chemical agent-filled munition that can be delivered against targets beyond artillery range. The Soviets can attack and degrade not only close-in targets but also airfields, logistic nodes, command and control facilities, and other functions. US and allied forces have a very limited capability to retaliate and impose similar degradations on the Warsaw Pact.

To provide a credible CW deterrent, the United States needs to acquire modern chemical munitions and improve delivery means. Only by establishing a credible CW retaliatory capability can the United States hope to raise the level of deterrence and persuade the Soviets to negotiate a chemical weapons ban seriously. Figure IV-25 summarizes US retaliatory capabilities and modernization programs.

Special Operations Forces

Special operations forces (SOF) are specially trained, equipped and organized Department of Defense (DOD) forces with the mission of conducting special operations (SO) in pursuit of national military, political, economic or psychological objectives. SO may be conducted during periods of peace or war and they may support conventional operations or be

SPECIAL OPERATIONS FORCES

US Chemical Retaliatory Capabilities

CURRENT

Inventory	Amount of Total Inventory	Condition	Deficiencies
• Persistent and Nonpersistent Nerve Agent Artillery	10%	• Useful	• Limited to artillery range • Wrong agent mix • Aging stockpile
• Nonpersistent Nerve Agent Bomb		• Useful	• Wrong agent mix • Aging stockpile
• Persistent and Nonpersistent Agent Small Artillery and Mortars	18%	• Limited Use	• Short range • High risk to friendly forces • Does not support modern tactics
• Airborne Spray Tanks		• Limited Use	• High risk delivery method • Does not support modern tactics
• Bulk Nerve Containers • Bulk Mustard Containers	72%	• Of No Use	• No fill facilities • No useful munitions to fill
• Other Configurations		• Obsolete	• No delivery system • Damaged or defective

PLANNED IMPROVEMENTS

Binary Systems

- Against enemy frontline troops
  - 155mm artillery projectile with nonpersistent agent
- Against enemy follow-on troops and complexes
  - MLRS chemical warhead with semi-persistent agent
- Against large enemy troop concentrations, airfields, and logistic complexes
  - BIGEYE bomb with persistent agent

As of 1 January 1986

FIGURE IV-25

tasked independently when the use of conventional forces is either inappropriate or infeasible.

SO may include unconventional warfare (UW), combating terrorism, collective security (to include foreign internal defense (FID)) psychological operations (PSYOP), deception, direct action (DA) missions, intelligence (strategic and tactical) collection and reporting.

AC-130 GUNSHIP

The Joint Special Operations Agency (JSOA), operating under direction of the Joint Chiefs of Staff, provides oversight to improve the management of SOF and increase the responsiveness of these forces to worldwide requirements. JSOA is charged with advising the JCS in all matters pertaining to SO and military activities including strategy, planning, programming, budgeting, resource development and allocation, joint doctrinal guidance, exercise and readiness evaluation, and employment of forces. Figure IV-26 outlines some of the initiatives under way to enhance these forces.

EMPLOYING AND SUPPORTING THE FORCES

Force Capabilities

Status and Trends

The readiness of forces to perform their missions depends on the personnel and materiel resources provided and how well those resources are trained and maintained. The capabilities of US forces continue to improve as a result of successful recruiting and re-

US Special Operations Forces

Service	*Current Forces*	*Initiatives*
Army	• 1 Special Operations Command 8 Special Forces Groups 24 Special Forces Battalions 4 PSYOP Groups 13 PSYOP Battalions 2 Special Operations Aviation Battalions • 1 Ranger Regiment HQ • 3 Ranger Battalions • 1 Civil Affairs Battalion (Active) 3 Civil Affairs Commands (USAR) 5 Civil Affairs Brigades (USAR) 4 Civil Affairs Groups (USAR) 24 Civil Affairs Companies (USAR)	• Additional special forces group • Increases in special forces and PSYOP personnel, helicopters, and staff support • Equipment improvements • Additional special operations aviation battalion
Navy/USMC	• 4 NAVSPECWAR Groups 7 NAVSPECWAR Units 2 SEAL Delivery Vehicle Teams 6 SEAL Teams 2 Special Boat Squadrons 6 Special Boat Units 2 Light Attack Squadrons (USMCR) 3 Dry-deck Shelter-capable Submarines • 4 Civil Affairs Groups (USMCR)	• 1 new SEAL team • Procurement of specialized equipment • Construction of special facilities and support craft • 3 dry-deck shelter-capable submarines per fleet • Marine Amphibious unit special operations capability (MAU/SOC)
Air Force	• 1 Air Division 1 Special Operations Wing 5 Special Operations Squadrons 1 Helicopter Detachment 1 Combat Control Squadron • 2 Reserve Special Operations Groups 3 Special Operations Squadrons	• Additional COMBAT TALON (MC-130) aircraft • EC-130E VOLANT SOLO II aircraft upgrade • Upgrade of survival systems and inflight refueling • Navigation and special avionics upgrades • Additional HH-53 PAVE LOW helicopters • Additional AC-130H gunships

As of 1 January 1986

FIGURE IV-26

tention efforts, improved training, increased emphasis on the equipment modernization programs, and enhanced logistical support programs. Sustained funding will be required to maintain the current momentum.

Recent trends have placed increased reliance upon RC forces to perform many missions that would be required in the initial stages of a crisis. However, these forces are not fully responsive because of legal constraints to their recall. Before continuing to increase our reliance on Reserve forces, the economic and strategic advantages of the current mix should be measured against the impact of expansion on peacetime presence, military strategy, and capabilities to perform warfighting missions in a timely manner.

Existing legislation can provide only limited early access to RC capabilities. Recent analysis conducted by the JCS concluded that the 100,000 Selected Reserve ceiling available to the President under his callup authority should be raised to 200,000. This increase is essential to meet the needs of the unified and specified commands and to prepare the CONUS mobilization base for further expansion.

Reserve Force Contributions

Reserve forces, which constitute approximately 45 percent of the total force structure, play a key role in the implementation of US military strategy. Over one-third of the Army's combat divisions are in the Army National Guard; two-thirds of the combat service support structure is in the reserve. Half of the Military

Airlift Command's (MAC) strategic airlift crews and SAC tanker-cargo (KC-10) aircrews, 92 percent of Air Force aeromedical evacuation aircrews, 54 percent of the tactical airlift capability, 73 percent of the CONUS strategic interceptor forces, and 33 percent of the tactical fighter forces belong to the Air National Guard or Air Force Reserve.

The Naval Reserve operates over 86 percent of the ocean minesweepers, and contributes one-third of the total Navy medical support personnel. Ninety percent of Port Security forces for deployment ports is provided by the Coast Guard Reserve. The Marine Corps Reserve provides 25 percent of the Marine Corps structure with an additional division, aircraft wing, and force service support group.

Reserve forces play an important role in day-to-day operations. Within the last year, 24,000 Army and 6,000 Air National Guard and Reserve members participated in 14 major international exercises worldwide. Naval Reserve maritime patrol aircraft (P-3s) routinely perform land-based ASW patrols from bases in the Atlantic and Pacific. In addition to their primary mission of refueling SAC alert forces, Air Force Reserve tankers support forces of that command in Europe, the Pacific, and Alaska. Air Reserve aerial port teams regularly provide augmentation at major air terminals in CONUS and overseas. Intratheater airlift forces provide over 12,000 hours per year of joint airborne/air transportability training missions. Air Force Reserve C-5 and C-141 aircrews routinely fly 30 percent of MAC's airlift missions worldwide. The increasing number of Naval Reserve Force frigates maintain wartime readiness while operating and exercising with active force ships. The Coast Guard reserve provides waterborne security for all space shuttle launches at Cape Canaveral, escort of TRIDENT submarines, and other events when it is necessary to establish port security zones. During FY 1985, Marine Corps reserves participated in 18 major exercises conducted in CONUS, Alaska, Korea, Thailand, Panama, Canada, Guam, and England.

Training and Exercises

Realistic and challenging training is essential to the development and maintenance of US capabilities. Facilities such as the Army's National Training Center, the Marine Corps' Air-Ground Combat Center, and the Air Force's Fighter Weapons Center and the Strategic Training Route complex provide environments in which units can experience wartime conditions against realistic adversaries. Data gathered at these and similar facilities allow the Services to improve doctrine, tactics, training methods, and unit operating procedures. Range modernization, acquisition of training simulators and devices, and the increased use of technology are helping to provide more effective, realistic training. Cooperative training projects with our NATO Allies provide economies of scale and enhance standardization of tactics and procedures.

EXERCISE BRIGHT STAR

As an important extension of Service training, the exercise programs directed and coordinated by the JCS provide opportunities to evaluate joint doctrine, tactics, techniques, and procedures, and command and control capabilities — knowledge essential to ensure the readiness of US forces to support the unified and specified commands. This program, which includes approximately 95 exercises per year, takes place throughout the world. Additionally, combined exercises with allies provide the necessary interaction to test and evaluate combined systems, effectiveness of LOCs, and adequacy of mutual support agreements.

In addition to supporting general training objectives, joint exercises demonstrate US resolve and the capability to project a military presence in support of national interests and commitments. The BRIGHT STAR series of exercises conducted in Southwest Asia demonstrates the US capability to project military forces into that region should the need arise. Similarly, intensified joint and combined exercises have been conducted with friends and allies in the Central American-Caribbean region. The annual REFORGER/CRESTED CAP exercises for the reinforcement of NATO, and TEAM SPIRIT which takes place in Korea, continue to demonstrate resolve and support for US allies in those regions.

EXERCISE TEAM SPIRIT

These various full-spectrum training and exercise programs are considered essential to maintaining the readiness of theater-assigned/augmentation forces. The programs serve as an excellent means to test all aspects of US reinforcement plans and the interoperability of host-nation general defense plans, systems, and procedures. The programs also demonstrate the capability to deploy substantial military power and provide a means for evaluating fighting concepts and procedures, interoperability, and sustainment of forces.

Mobility

US military strategy requires the capability to deploy forces rapidly and sustain them. Air, sea, and land mobility forces must be able to deliver forces where they are needed in time to make a difference. Intertheater and intratheater airlift will generally transport deploying forces during the early days of a crisis until surge sealift begins to arrive with the bulk of deploying unit equipment. These movements will include personnel and equipment supported by pre-positioned stocks. Sealift delivers follow-on forces and provides the sustaining power for deployed forces. Land mobility forces provide needed offload capabilities and, together with intratheater airlift and sealift, support onward movement requirements.

EXERCISE REFORGER

C-5A GALAXY

Airlift

Airlift is essential to the rapid deployment of US forces. Programmed increases in intertheater aircraft, continued acquisition of aircraft spares, extensions to service lives of existing aircraft, and enhancement of Civil Reserve Air Fleet (CRAF) capabilities are contributing to maintaining improvements in aircraft readiness and sustainability. A summary of airlift forces is presented in Figure IV-27.

US Airlift Forces

Military Aircraft

Type	Number** (Active/Reserve)
C-5	62*/8
C-141	218*/16
C-130	216/304
KC-10	38*/0

Civil Reserve Air Fleet

Type	Number**
Domestic	57
Alaskan	15
Short-range International (cargo)	6
Short-range International (passengers)	20
Long-range International (cargo)	67
Long-range International (passengers)	227

* C-5, C-141, and KC-10s are jointly operated by Active and Associate Reserve Units

** Full Activation

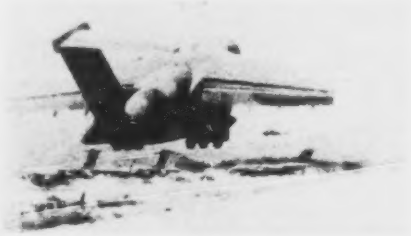
As of 1 January 1986 *FIGURE IV-27*

The FY 1987 funded airlift force will provide approximately 45 million-ton-miles per day (MTM/D) of intertheater cargo airlift capability which includes the acquisition of C-5Bs and additional KC-10s. Wing repairs and modifications will extend the service life of C-130A aircraft into the 1990s and the C-130B/E aircraft well past the year 2000.

CRAF consists of commercial aircraft voluntarily committed by US civil air carriers to serve during national emergencies. The CRAF Enhancement Program is designed to modify passenger aircraft into convertible freighters suitable for bulk and oversize cargo. The airlines have received one DC-10, two B-747s, and expect to receive six more B-747s in FY 1986. FY 1986 funding will complete the modification program for a total of 19 B-747s and 1 DC-10. These modified aircraft will provide an additional 3.0 MTM/D of cargo capability.

C-130E HERCULES

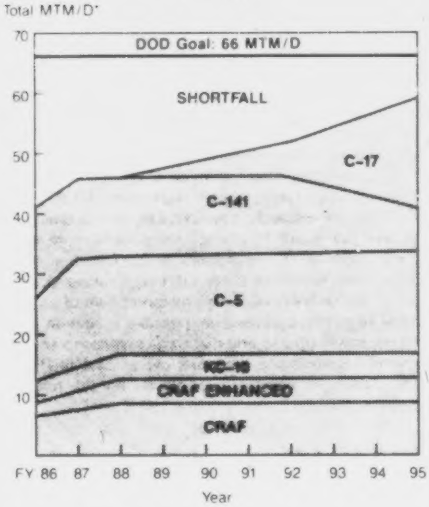
The C-17 is programmed to reduce the airlift shortfall further. Full-scale engineering continues, with the IOC scheduled for FY 1992. This aircraft will provide increased intertheater and intratheater capabilities to deliver troops and all categories of cargo, including outsize, to field commanders, using normal and combat offload techniques, outsize airdrop, or low-altitude parachute extraction. The air-refuelable C-17 has outstanding ground maneuverability and takeoff and landing profiles designed to allow routine operations at small, austere airfields. These features will provide considerable operational flexibility. The C-17 will replace part of the C-141B fleet as that aircraft approaches the end of its useful service life. The C-17 also offers the additional bonus of offsetting capabilities lost when the older C-130s retire. A summary of programmed intertheater cargo airlift capability is presented in Figure IV-28.



C-17

US Intertheater Cargo Airlift Capability

(Funded)



* Million ton-miles per day

As of 1 January 1986 *FIGURE IV-28*

Sealift

In any major overseas deployment, sealift will deliver about 95 percent of all dry cargo and 99 percent of all petroleum products. However, the number of militarily useful US-flag dry cargo ships available to support deployments has continued to decline with little hope of resurgence in the near term. Not only is the number of available ships declining, but those remaining are not necessarily the most suitable for military purposes. The most useful ships for military deployment are roll-on/roll-off (RO/RO), breakbulk, and barge carriers.

The US-flag merchant marine's decline necessitates a large pool of government-owned shipping, such as the Ready Reserve Force (RRF), to furnish readily available lift capacity that is needed in time of mobilization. The RRF provides the surge shipping needed early for a deployment. In 1985, the Navy began to locate some of the RRF ships at activation ports to increase their response time. Ships in the National Defense Reserve Fleet (NDRF), another set of government-owned shipping, are a valuable but aging asset, currently capable of providing approximately 136 ships for sustainment requirements/attrition replacements.

US NAVY — MILITARY SEALIFT COMMAND
ROLL-ON/ROLL-OFF (RO/RO) SHIP

The sealift support from our allies has become increasingly important. This support is necessary to offset the continued decline in US commercial sealift assets. NATO has promised up to 600 ships for the rapid reinforcement of NATO and Korea has promised 45 ships for its support. However, the NATO shipping pool is also declining. This fact may in the future cause NATO to institute some type of government controlled shipping pool similar to the US RRF. Strategic sealift resources are shown in Figure IV-29.

The Civil Reserve Auxiliary Fleet Ships (CRAFTS) program will encourage more US-built ships in the world shipping trade. Under the CRAFTS concept, potential operators and builders work in conjunction with the Navy to design and build economically viable, militarily useful ships. The Navy will pay up front for those systems/enhancement features, as well as an operating penalty (fuel cost) due to increased dead weight. This will provide a US operating ship which can be called upon in time of emergency to support sealift surge and resupply requirements and is a more cost-effective, long-term supplement to the RRF program.

Other strategic sealift programs are also under way. Eight SL-7 class-containerships have been purchased and converted to an enhanced partial RO/RO configuration. Two aviation logistics support ships (TAVB) will complete conversion in FY 1986 and will be placed into a RRF-like status. These ships will provide the lift for intermediate level maintenance facilities to support Marine Corps aircraft. Two other ships are

Strategic Sealift Resources

(Funded)

	Dry Cargo	Tankers
US Flag Merchant Ships	184	112
Government Controlled Ships		
Military Sealift Command Direct Controlled	13	21
Military Sealift Command Reduced Operating Status (ROS)	8	0
Military Sealift Command Pre-positioning Force		
• Pre-positioning Ships (PREPO)	8	4
• Maritime Pre-positioning Ships (MPS)	13	
Ready Reserve Force	70	9
Effective US Control	27	64
US Totals	323	210
NATO Pool	600	0
US—NATO Totals	923	210
Korea		
Ships*	40	5
National Defense Reserve Fleet (remaining useful)	137	6

* Not intertheater assets

As of 1 January 1986 *FIGURE IV-29*

ARMORED VEHICLES AWAIT LOADING

being converted into hospital ships (TAH). In addition, the auxiliary craneships program has been converting containerships to craneships in order to create the capability to offload non-self-sustaining shipping either pierside or in-stream.

Logistics Over the Shore (LOTS)

The ability to rapidly load, offload, and transfer unit equipment, bulk liquids, ammunition, and supplies is required to keep pace with airlift and sealift deliveries. Mobility analyses, such as the DOD Sealift Study, have identified the requirement to project a large, balanced force into a bare environment such as found in the Western Pacific, Southwest Asia, or Central and South America. A major program is now under way to modernize and upgrade the Army's watercraft fleet to meet LOTS requirements. In the near term, LOTS capability will be improved through the addition of two companies of LACV-30 air cushion vehicles, the purchase of discharge systems such as floating causeways and RO/RO discharge facilities, and the procurement of logistics support vessels (LSVs), landing craft, utility (LCU), and tugboats. The long-term Army program totals over $1B through FY 1991 for research, development, and acquisition of new watercraft to provide the capability to meet a minimum LOTS requirement of 21,000 short tons daily. The Army and Navy are coordinating closely under the umbrella of a joint memorandum of agreement to procure, whenever possible, common and interoperable offload and discharge systems to ensure system compatibility, minimum overall cost to DOD, and maximum program support during the budget process.

Pre-Positioning

To overcome limitations of airlift and sealift, US programs for pre-positioning petroleum, water, supplies, equipment, and ammunition are in progress in various regions of the world. Such pre-positioning reduces rapid-deployment cargo requirements by permitting essential materials to be located where US forces would most likely be needed. Under the POMCUS program (pre-positioning of materiel configured to unit sets), equipment is being pre-positioned in Europe for Army divisions and numerous nondivisional support units. The pre-positioning of material configured to unit sets (POMCUS) program for Europe, the Marine Corps Land Pre-positioning in Norway, the war reserve stock for allies (WRSA) program for Korea, and important initiatives for Southwest Asia provide essential strategically located materiel.

Afloat pre-positioning allows the rapid movement of equipment and supplies from one region to another as priorities or circumstances dictate. The afloat pre-positioning force consists of two elements: the MPS program and the pre-positioning (PREPO) ships program (formerly Near-Term Pre-positioning Force (NTPF)).

The MPS program is designed to combine the responsiveness of airlifted Marines with sealift delivery of pre-positioned equipment. The 13 ships involved in the program will be organized into 3 MPS squadrons. The ships will carry equipment and 30 days of supplies for three MABs. The first squadron was deployed to US Atlantic Commands (USLANTCOM) area. The second squadron was deployed to Diego Garcia. The third MPS squadron deploys to US Pacific Command (USPACOM) this fiscal year. The PREPO ships consist of those ships in the Mediterranean Sea, Pacific Ocean, and Indian Ocean carrying equipment and supplies for the Army, Navy, and Air Force.

Deployment Management

The Joint Deployment System (JDS) is designed to assist in effective deployment planning and provide active management during force deployment execution. The JDS provides timely change capability and visibility of force movement to all deployment participants linking the NCA, Transportation Operating Agencies, force providers, and force users.

Sustainability

Sustainability is the staying power of military forces once they are deployed. A component of this is materiel sustainability. Materiel sustainability is composed of several interdependent elements, including theater pre-positioning programs, CONUS depot stocks, host-nation support, and the industrial production base. Over the past several years, Service program efforts have improved US sustainability worldwide; however, pre-positioning objectives represent only the minimum quantities required to sustain combat forces until the SLOCs can be securely established.

Ammunition

While there have been recent improvements, commanders continue to identify inadequate ammunition stockpiles as a significant constraint on their combat capabilities. These shortages are particularly acute for the more modern munitions which provide increased firepower while reducing delivery system vulnerability. The Services have continued to fund increases in war reserve ammunition stockage. Programs for correcting ammunition shortfalls must strike a balance between increasing pre-positioned and CONUS stockpiles without undermining industrial base enhancements. Additionally, the United States has been encouraging allies to improve their own ammunition sustainability and to produce munitions compatible with US pre-positioned stocks within their countries.

Petroleum, Oils, and Lubricants

Significant progress has been realized in sustainability by increases in worldwide petroleum war reserves. Specific areas, however, still require additional efforts. Competing priorities for funds within NATO have delayed improvements to the Central European Pipeline System. In addition, maintenance of POL war reserve stock levels is becoming difficult due to rotation requirements and resultant quality control problems. It is becoming more important to rebuild DOD's land and ocean distribution assets so available stocks can be rapidly repositioned where and when needed. The Navy is progressing with development of the Offshore POL Discharge System (OPDS) which will allow bulk fuel discharge from large tankers across an unimproved beach or damaged port. OPDS supports the fuel requirements of Army, Air Force, and Marine Corps units operating ashore.

Military Construction

The NATO Alliance agreed in 1984 to support significant increases in infrastructure funding for 1985 through 1990. This level of funding represents more than a 50 percent real increase over annual funding for 1980 through 1984. This funding will lead to completion of minimum essential facilities for reception of US tactical aircraft at all collocated operating bases. It will also permit NATO to improve airbase survivability by construction of hardened aircraft shelters and support facilities and to continue planning for improved command and control capabilities.

In Southwest Asia, the objective of military construction (MILCON) programs is to provide a network of facilities to support pre-positioning of materiel and pre-deployment, staging, and employment of USCENTCOM forces. To date, airfield improvements and construction of logistic support facilities have greatly enhanced the US ability to deploy and sustain US forces in the region. In addition, leased warehouses will facilitate the pre-positioning of materiel, while port dredging will enhance fleet support. Negotiations for access and pre-positioning agreements are continuing and are a necessary preliminary for expanding current facilities in Southwest Asia.

Throughout the Pacific, host-nation and US military construction are continuing to improve POL, munitions, and medical storage capabilities, as well

F-15 IN HARD SHELTER

as the working and living conditions for US military personnel. Joint US-Japan funding is supporting the stationing of two F-16 squadrons in Japan. The arrival of the first squadron occurred in FY 1985. ROK-funded construction projects will enhance the combat support and survival of US forces deployed to Korea. MILCON is needed in Guam and the Philippines to maintain readiness.

Wartime Host-Nation Support

The objective of wartime host-nation support (WHNS) is to provide essential support of the LOCs, including reception, staging, onward movement, and resupply, to US forces deployed to foreign countries during times of tension or war. This support is made available to the United States through negotiated general bilateral agreements and detailed joint logistics plans. The assurance of this support through these agreements not only enhances sustainability of combat forces, but also lends credibility to the concept of a viable conventional defense. WHNS is provided to offset shortfalls in unilateral US capability, particularly in the early stages of a conflict. Progress continues as the detailed arrangements of the joint plans are further refined with NATO Allies. In the Pacific, Korea provides valuable wartime support by making available its airline, shipping, and traffic management assets in order to enhance the flow of essential logistics.

Medical Support

Shortfalls continue to exist in US medical support capabilities. If US forces were simultaneously engaged in both Western Europe and Northeast Asia, the Services could currently provide only 30 percent of the estimated 116,840 hospital beds required during the initial 60 to 90 days of combat. This shortfall is the result of inadequate funding prior to 1983, procurement delays, and inadequate HNS agreements for pre-positioning and deployment of medical assets. Current Service programs fund 13,580 new beds in FY 1986 and program 14,950 new beds in FY 1987. These beds, plus those funded but not delivered, will increase the total medical support capability to 78.1 percent of the programmed requirement. The additional medical assets to meet programmed requirements are expected to be available for deployment by FY 1993. Deployable medical systems must be funded at the programmed level to ensure acceptable medical care for theater combat forces.

Environmental Support

Force commanders require accurate and timely environmental information in order to fully exploit military force capabilities. The Congress must continue to fund military weather support programs which maintain the readiness of this combat support capability.

Intelligence

Access to accurate, timely information and warning of possible attack are essential for the NCA, JCS, and military commanders. Intelligence provides decisionmakers with assessments of enemy forces, capabilities, and probable courses of action. Human intelligence (HUMINT) continues to augment the capabilities of reconnaissance systems.

Reconnaissance Systems

The US reconnaissance program provides capabilities to meet many peacetime and wartime information collection requirements. Reconnaissance resources consist of strategic and tactical standoff, and penetration systems. These systems provide intelligence data that might otherwise be denied to operating forces.

Strategic airborne systems include U-2R, SR-71, RC-135, and EP-3E aircraft that carry a variety of sensors. Tactical aircraft standoff systems include the Air Force TR-1, EC-130, and RC-135, the Army OV-1 and RV-1D, the Navy EA-3B and EA-6B, and Marine Corps EA-6B. The only Air Force tactical reconnaissance aircraft used in a penetrating role is the RF-4C with photo, infrared, side-looking airborne radar, and tactical electronic reconnaissance capabilities. The Navy uses the F-14 Tactical Air Reconnaissance Pod System (TARPS), and the Marines employ the RF-4B in a similar role. Planned improvements to strategic and tactical systems provide for additional TR-1 and U-2R aircraft and installation of the Advanced Synthetic Aperture Radar System (ASARS). RF-4 enhancements include electro-optical sensor, recorders, data link and a ground terminal program for receipt, exploitation, and dissemination of collected information. Also included are the Navy's conversion in lieu of procurement of the EP-3E, and the carrier battle group passive horizon extension system.

SR-71

TR-1

F-14 WITH
TACTICAL AIR RECONNAISSANCE POD SYSTEM

The P-3 aircraft provides primary ocean surveillance for both surface and subsurface targets. Acoustic ocean surveillance of submarine activity is provided by the Sound Underwater Surveillance System (SOSUS) networks.

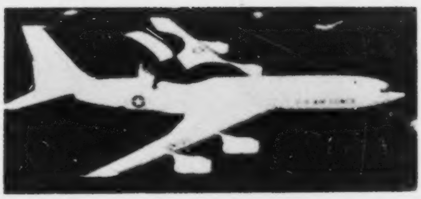
The collection, processing, and dissemination of tactical intelligence will benefit from developments in high-capacity data links, improved sensors and related processors, e.g., the Air Force's Tactical Reconnaissance System, the Army-Air Force Joint Surveillance and Target Attack Radar System (JSTARS), and the Navy's Ocean Surveillance Information System Baseline Upgrade. All-source fusion centers are also under development. The Advanced Deployable Imagery Support System (ADDISS) and Improved GUARDRAIL, for example, will eventually provide tactical commanders the means to assimilate information quickly from national and tactical sensor systems. The Commanders' Tactical Terminal, now under development, will facilitate dissemination of signals intelligence data.

Command and Control

Effective command and control is essential to the successful employment of military forces. Command and control systems are made up of people, equipment, and information systems designed to assist in planning, directing, and controlling military forces. Improvements in secure, interoperable, and survivable command and control systems for tactical forces have traditionally lagged behind those provided strategic forces.

Command, control, and communications (C^3) interoperability has been a primary reason for successful exercises that US forces conduct with the forces of allied and friendly nations; coordination of operations could not be achieved without it. Combined C^3 interoperability provides the leverage for forces of the United States and other countries to be an effective counterweight to larger forces of the Soviet Union. Persistent attention is required to improve C^3 interoperability in the face of technological change and widely varying degrees of C^3 system modernization among all friendly forces.

The Joint Tactical Information Distribution System (JTIDS), currently in development and production, will significantly improve the commander's ability to exchange tactical information using digital communications among tactical units. Tactical air communications are also being upgraded with antijam



E-3A SENTRY

systems, such as HAVE QUICK. Communications for tactical commanders will be improved by such programs as the Ground Mobile Forces Satellite Communications Program, the fielding of the single channel ground-airborne radio system (SINCGARS), and the implementation of message standards for Joint Interoperability of Tactical Command and Control Systems (JINTACCS).

The Position Location Reporting System (PLRS), a joint Army-Marine Corps command and control program, will improve the ability of tactical commanders to locate and identify deployed friendly forces. JSTARS, which is being developed to improve target acquisition and weapons placement and battle management, will complement PLRS.

Effective Defense-wide communications systems are essential for the command and control of strategic and tactical forces, as well as their logistic, intelligence, navigation, and meteorological support. The Defense Communications System (DCS) provides US military forces with worldwide voice, data, and teletype services through networks of government and commercial facilities. In response to increased requirements, DCS subsystems will undergo changes that enhance survivability, expand transmission security, improve interoperability, and increase flexibility. Specific improvements include an increase in the number of switching systems and transmission paths, addition of physical and transmission security features, and development of countermeasures to protect network control facilities against computer manipulation.

A Secure Voice Improvement Program (SVIP) is being implemented to employ encryption techniques and technology compatible with the Civil Federal Secure Telephone Service and a secure telephone unit developed by the National Security Agency. Interoperability between the DCS and other military secure networks will be accomplished by facilities being developed under the SVIP.

Guidelines for increasing the survivability and interoperability of DOD telecommunications systems are being developed. The Worldwide Digital System Architecture (WWDSA) establishes a framework for DOD communications to ensure that voice and data networks operate into the next century. The DOD message system is being modernized for the 1990s by the Integrated AUTODIN System Architecture (IASA) which includes the long-haul trunking system, Defense Data Network (DDN), currently being deployed; the message entry system, Inter-Service/Agency Automated Message Processing Exchange (I-S/A AMPE), currently under contract; and a multi-level security device for the transmission network, currently under development. The Defense Switched Network (DSN) will digitize and improve command and control capabilities of the AUTOVON in a related program.

The WWMCCS Information System (WIS) is being developed to modernize the current WWMCCS Standard Automatic Data Processing System and provide improvements in reliability, accuracy, and responsiveness. The main goal of this modernization is to provide timely, reliable, and responsive command and control information to the NCA.

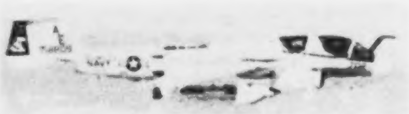
The Joint Operation Planning and Execution System (JOPES) is the conventional war planning and execution system of the future. It consists of doctrine, policies, reporting structures, and procedures supported by information processing systems working together to improve capabilities to monitor, plan, and execute mobilization, deployment, employment, and sustainment during peace, crisis, and war. JOPES requirements are being developed and phased into operation over several years using the expanded capabilities of WIS and other related ADP programs.

Electronic Warfare (EW) and Command, Control, and Communications Countermeasures (C^3CM)

EW systems are an integral part of the total capability of US forces to fight and survive on a modern battlefield. EW systems maximize the effectiveness of friendly forces while reducing enemy capability to use the electromagnetic spectrum. The worldwide threat to US forces is extremely diverse, encompassing the entire range of frequencies from extremely low frequency communication to laser weapons developments. The rapid introduction of new hostile weapon systems and incorporation of advanced technologies significantly stress existing US forces' EW capabilities. Our EW capabilities must keep pace with this threat by introducing new state-of-the-art systems and improving existing systems as practical. A DOD Electronic Warfare Plan was prepared under the direction of the Joint Requirements Management Board (JRMB) and approved by the JCS in August 1985. This plan describes the collective efforts of the Services to prepare and program for US EW missions and provides a roadmap to increase the use of joint and common programs. Continued deployment of systems such as the EF-111 and the EC-130H (COMPASS CALL) is necessary to provide US forces with adequate EW capability.

EF-111 ELECTRONIC WARFARE AIRCRAFT

C³CM remains an essential element of modern combat capability. It is a capability through which US forces destroy, disrupt, or otherwise degrade the enemy's ability to control its forces effectively, while protecting friendly command and control. The Soviets' capability to reduce our C³ effectiveness is formidable. On the modern battlefield, headquarters staff, field, and tactical commanders must emphasize C³CM strategy and training to effectively translate existing battlefield resources (men, munitions, and weapon systems) into usable combat power.



EA-6B ELECTRONIC WARFARE AIRCRAFT

Joint Perspective

Role of the JCS

The joint system, independent of the Services, has evolved since 1947 to command worldwide US military forces. The role of the JCS is determined by statute and by amplifying directives of the Secretary of Defense. These functions can be summarized in two general responsibilities: (1) to serve as the principal military advisors to the President and the Secretary of Defense, and (2) to prepare strategic plans and provide for the strategic direction of the armed forces, including the direction of operations conducted by the CINCs. The operational chain of command runs from the President to the Secretary of Defense through the JCS to the CINCs. The JCS have no command authority, but in effect provide a channel of communication between the NCA and the CINCs.

Role of the Commanders in Chief

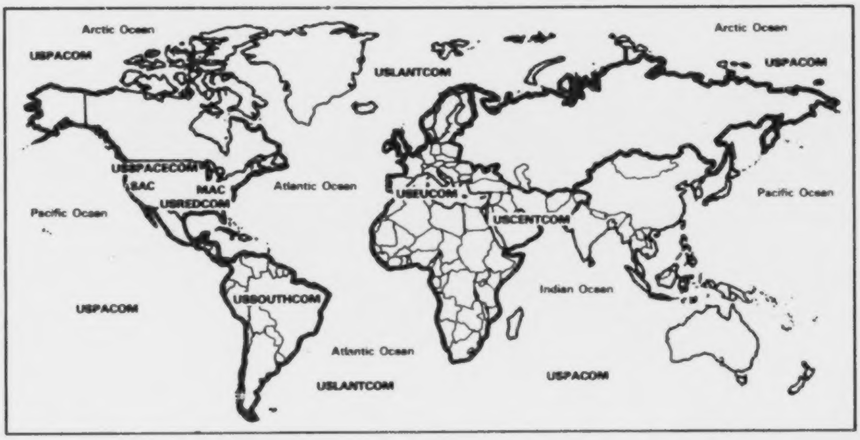
The CINCs command the forces assigned to them in both peace and war and have regionally or functionally oriented responsibilities. The major commands are designated as either unified or specified. Unified commands are composed of major forces from two or more Services and have a broad continuing mission to plan and, if necessary, execute military operations in support of US national security objectives. A specified command is one which has a broad continuing functional mission and is usually composed of forces from one Service. Figure IV-30 identifies the unified and specified commands and their areas of responsibility.

The Services are charged with providing forces to the CINCs and supporting those forces. Although the CINCs are not directly responsible for organizing, training, and equipping forces, which are Service responsibilities, they are playing an expanding role by influencing these factors through active participation in the DOD resource process. The JCS, together with the Services and CINCs, have implemented several joint programs with the goal of increased Service interoperability, improved joint warfighting capability, and more efficient management of limited resources.

Joint Doctrine

Military doctrine provides the fundamental principles by which forces are employed. Joint doctrine

Commanders' Area of Responsibility



As of 1 January 1986

FIGURE IV-30

provides the foundation of which multi-Service forces are employed in support of national objectives. This perspective provides a framework for the development of solutions to facilitate superior joint warfighting capabilities. Emphasizing interoperability makes possible many improvements at relatively low costs with the potential to provide tremendous operational payoffs. Gains in each area increase US capability to successfully conduct joint operations, in the broadest sense of interoperability, to counter the global threat.

The JCS have continued to guide the process of joint doctrine development and Service interoperability. US Commander in Chief, Atlantic Command (USCINCLANT) has been tasked to lead the development of doctrine for strategic and tactical air support of maritime operations. US Commander in Chief, Europe (USCINCEUR) is leading the development of doctrine for theater counter-air and follow-on forces attack. JSOA is developing joint doctrine for psychological operations. The common thread of these initiatives has been the recognition that the interoperability of warfighting forces is essential to conducting successful joint operations.

Combined Doctrine

Since the United States is a member of many military alliances, all Services must be prepared to integrate their forces with those of our allies during times of conflict. Combined doctrine has been developed through allied agencies to improve rationalization, standardization, and interoperability (RSI). Although there has been improvement in this area over the last several years, much remains to be done. The European Theater remains the focus of this activity, with NATO agencies working to meet the challenge of standardization among its member nations.

Joint Force Development Process

The Joint Force Development Process (JFDP) was established in 1984 by the Army and Air Force as an initiative designed to field the most effective, affordable forces in support of air-land combat operations. Of the original 31 initiatives, 16 have been implemented and 4 new initiatives addressed. Additionally, the Navy and Marine Corps have joined the cooperative effort with full participation in four initiatives and informal involvement in seven others. US Commander in Chief, Readiness Command (USCINCRED) has been tasked with responsibility for developing joint tactics, techniques, and procedures (JTTP) and with evaluating the Army/Air Force JFDP.

The Air Force and Navy have also undertaken a number of joint initiatives outside the JFDP in order to enhance combined effectiveness in maritime operations and operations ashore. Air Force/Navy efforts continue to be directed toward increased joint exercise and training, billet exchanges, and research and development.

Joint Resource Assessment

The Strategic Plans and Resource Analysis Agency (SPRAA) provides JCS military analyses and recommendations concerning the impact of defense programs and budget proposals on the capabilities of the force in the field. SPRAA is the Organization of the Joint Chiefs of Staff (OJCS) focal point for examining the resource implications of joint planning issues.

Joint Program Management

Since 1984, the JRMB has been charged with examining potential joint military requirements, identifying, evaluating, and selecting candidates for joint development of cross-Service requirements and management issues, and resolving Service issues that arise after a joint program has been initiated.

In summary, the JCS, the Services, and the CINCs have focused on the global nature of US national security objectives, the relationship of both nuclear and conventional forces to the strategy of deterrence, and the necessity to plan, size, equip, and train forces as they would be used in war.

CHAPTER V. TOPICS OF SPECIAL INTEREST

INTRODUCTION

The preceding chapters addressed US security requirements and major military forces. This chapter outlines the status of arms reduction talks and discusses military space activities, security assistance, defense manpower, international terrorism, DOD support to drug interdiction, and European troop strength.

ARMS NEGOTIATIONS

The United States participates in bilateral and multilateral negotiations on arms control to protect US and allied security interests, build global stability, and promote favorable international relationships. These negotiations are an integral part of the US national security strategy. Equitable and effectively verifiable arms reduction agreements and related negotiations can contribute to security at reduced force levels. Arms control cannot however substitute for necessary force modernization, both efforts are mutually reinforcing elements of our national security and contribute significantly to the enhancement of stability and deterrence.

Any agreement is only as good as the willingness of the signatories to comply with the obligations assumed. Soviet noncompliance with several agreements to which both sides have committed themselves is of great concern and must cease. The Joint Chiefs of Staff continue to take an active role in the monitoring process, subsequent development of judgments concerning Soviet compliance, development of effective verification as a keystone of future agreements, and development of US defense programs to offset the military risk resulting from current Soviet noncompliance.

Nuclear and Space Talks

The United States and Soviet Union were involved in strategic nuclear, intermediate-range nuclear, and antisatellite negotiations prior to 1985, but the last of these negotiations ended when Round V of the Strategic Arms Reduction Talks (START) adjourned in December 1983 without Soviet agreement on a resumption date.

In January 1985, the two countries jointly announced agreement to begin new negotiations on a complex of questions concerning space and nuclear arms, both strategic and intermediate-range. The purpose of the Nuclear and Space Talks (NST), which commenced in Geneva in March 1985, is to reach agreements aimed at reducing nuclear arms and strengthening strategic stability. Following their November 1985 meeting in Geneva, President Reagan and Secretary General Gorbachev agreed to accelerate work at the NST and called for early progress, particularly in areas where there is common ground. Progress in the three negotiating groups of the NST is outlined in the following paragraphs.

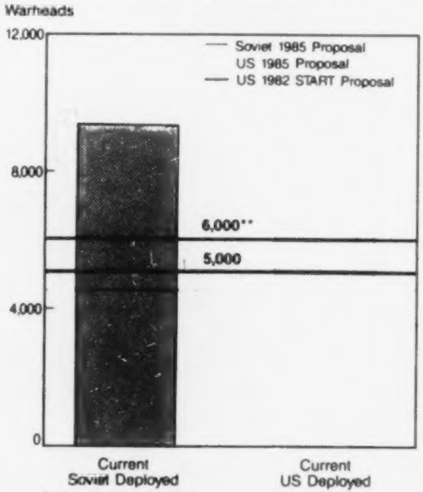
Strategic Arms

The primary objective of the United States in the negotiating group on strategic arms is to achieve a stable and verifiable balance at significantly reduced levels of nuclear forces. The US approach to strategic arms recognizes the need to redress the current strategic imbalance through force modernization and equitable, verifiable arms reductions. The United States is most concerned with reducing the levels of ballistic missile systems, particularly MIRVed land-based ICBMs, but is also prepared to negotiate limits on other systems as well. The United States has submitted a draft treaty and stressed its flexibility concerning the pace of reductions and the framework under which reductions would take place, but it has insisted that more stable force structures must result. Although initially unwilling to engage in serious discussions, the Soviets submitted a counterproposal at the end of September 1985.

Unfortunately, the Soviet counterproposal still seems to hold START hostage to US concessions on intermediate-range weapons and research on space defensive weapons. Additionally, although the Soviets stated that their proposal would require reductions of 50 percent in strategic offensive arms (to a level of 6,000), they attempted to redefine strategic arms as "those capable of striking the territory of the other side." Under this new definition, the Soviets stated that US forces to be reduced would consist of ICBMs, SLBMs, heavy bombers, medium-range missiles in Europe, "medium-radius-of-action" aircraft in Europe and Asia, and carrier-based aircraft. In contrast, the Soviet Union would only be required to reduce its ICBMs, SLBMs, and heavy bombers.

After study of the 1985 Soviet proposal, on 1 November 1985 the United States submitted a new proposal that calls for more drastic reductions in ballistic missile warheads than the 1982 US START proposal (to a level of 4,500 vs 5,000), but makes clear that the Soviet attempt to redefine strategic arms is unacceptable. The United States also informed the Soviet Union that the 1982 US START proposal "remains on the table" for Soviet consideration. Thus, although both parties have agreed to the principle of drastic reductions in strategic offensive arms, difficult negotiations remain ahead in applying that principle in an equitable and verifiable fashion to permit agreement. Figure V-1 illustrates the various proposals against a backdrop of numbers of nuclear ballistic warheads currently deployed by both sides.

Ballistic Missile Warhead Reductions*



* Numbers are rounded
** Includes many nonstrategic US weapons

As of 1 January 1986 *FIGURE V-1*

To provide the Soviet Union the opportunity to join the United States in establishing an interim framework of truly mutual restraint, the President declared in June 1985 that the United States would continue to refrain from undercutting existing strategic arms agreements, to the extent that the Soviet Union exercises comparable restraint, corrects its noncompliance, and actively pursues arms reduction agreements in the Nuclear and Space Talks in Geneva. To provide adequate time for the Soviets to demonstrate by their actions a commitment to join the United States in an interim framework of the true mutual restraint, the President directed the dismantlement of an existing POSEIDON SSBN in compensation for the ALASKA, a TRIDENT SSBN which began its sea trials in September 1985. The President will assess the overall situation as similar milestones occur and will make a final determination of the US courses of action on a case-by-case basis.

Intermediate-Range Nuclear Forces

The United States initiated and now continues intermediate-range nuclear forces (INF) negotiations as a part of NATO's 1979 decision to pursue a dual-track policy of INF modernization and negotiated arms reductions. Toward this end the United States, in close consultation with its NATO Allies, made a series of proposals designed to meet the security concerns of both NATO and the Soviet Union. These include a proposal for the complete elimination of US and Soviet longer range intermediate-range nuclear forces (LRINF) and, as an interim measure toward this goal, a proposal for equal global ceilings at the lowest possible level for LRINF missile warheads of both sides. US INF negotiators have stressed the flexibility inherent in these proposals and have outlined initiatives taken by the United States to meet special Soviet concerns. In the context of an agreement providing the right to equal global levels of US and Soviet LRINF missile warheads, the United States is prepared to consider a commitment not to offset the entire worldwide LRINF missile deployment of the Soviet Union by deployments in Europe, while retaining the right to such deployments elsewhere. The United States is also prepared to apportion its reductions between PERSHING IIs and GLCMs in an appropriate manner, and to consider equal limits on specific types of US and Soviet land-based aircraft.

The initial Soviet proposal in the current INF negotiations was limited until recently to a call for a LRINF missile moratorium. This provides that, in return for a cessation in US LRINF missile deployments to Europe, the Soviet Union would halt its "countermeasures" deployments begun when PERSHING II missiles first arrived in the Federal Republic of Germany (FRG) in November 1983. The Soviet Union has also spelled out a "reduction proposal" that was essentially a reiteration and compilation of previously unacceptable Soviet offers. A key element of this Soviet reduction proposal eliminates US LRINF missiles in Europe but permits the Soviets to retain a substantial number of SS-20 missiles. This is consistent with previous Soviet proposals.

As discussed in the preceding section on strategic arms, the Soviets made another proposal which, for all practical purposes, would treat US INF systems in the context of strategic arms negotiations while ignoring Soviet INF systems. In this "50 percent reduction proposal," US European-based PERSHING IIs and GLCMs, as well as all US sea-based and overseas land-based medium-radius-of-action aircraft, would be included in the global total for strategic nuclear weapons. Under other provisions US PERSHING IIs and GLCMs would be banned. On the other hand, Soviet medium-range missiles and aircraft would not be included and thus not limited. In an attempt to halt NATO modernization plans, the Soviets also called for a stop to US and Soviet medium-range missile deployments in Europe, which would codify the present overwhelming Soviet advantage in this area.

In early October 1985, the Soviets presented a proposal for an interim accord involving INF. The Soviets again called for both sides to freeze deployment of "medium-range" missiles in Europe. This would be followed by a stage-by-stage reduction of medium-range missiles until Soviet systems in Europe equal an aggregate number of US and all French and British nuclear missile forces. In a subsequent second stage of reductions, all US LRINF missiles in Europe would be eliminated while the Soviets would retain a right to match French and British nuclear missile forces with LRINF missile systems. The Soviets also offered a freeze of SS-20s in the eastern portion of the Soviet Union as long as there is no change in the "strategic situation" in the Asian region. The Soviet bottom line remains the same — zero US LRINF missiles in Europe against a significant worldwide SS-20 force.

Neither of the two Soviet proposals demonstrates movement from the 1983 Soviet position. After considering these proposals, the United States presented a new proposal on 1 November 1985 that clarified the unacceptability of the Soviet redefinition of strategic arms. The United States still prefers total elimination of LRINF missiles but, as an interim step, the US proposal calls for equal global LRINF missile warhead limits at a reduced level. The outcome would involve an equal European subceiling on LRINF missile launchers (140). The Soviets would also be required to reduce LRINF missile launchers in Asia proportionately to the reductions taken in Europe. Appropriate constraints would also be applied to shorter range INF missiles.

The United States continues to seek, as a step toward the eventual elimination of the entire class of LRINF missiles, an acceptable outcome in the negotiations at Geneva that would provide equal, effectively verifiable, and significantly reduced global levels of LRINF missile warheads.

Defense and Space

While the United States and Soviet Union held three rounds of antisatellite negotiations during the 1978-79 period, the current defense and space negotiations, which began in March 1985, have a much broader scope. In the first two rounds of the Geneva negotiations, the US approach focused on the need to address the instability that exists in the current strategic situation. Stressing the importance of reversing the erosion of the ABM Treaty and correcting Soviet actions that violate existing arms control agreements, the United States explained its view of the relationship between offensive and defensive forces, the potential contribution of defensive forces to our mutual security, and — if new defensive technologies prove feasible — the US desire for a stable and cooperative transition toward increased reliance on defenses. The Soviet Union, in an effort to stop the US SDI research program, proposed and continues to demand a comprehensive ban on research, development, testing, and deployment of what the Soviets call "space-strike arms." They continue to make US acceptance of such a ban a precondition for agreement on offensive nuclear arms reductions. The United States responded that research is not prohibited by the ABM Treaty and that a ban on SDI research is unacceptable since it would be neither verifiable nor desirable.

At the beginning of Round Three of the NST which began in mid-September 1985, the Soviets, in connection with their first nuclear arms reduction proposal of the current talks, reiterated their proposal for a ban on development (including scientific research), testing, and deployment of space-strike arms. The Soviet proposal strongly favors their objectives by linking a ban on SDI-related weapon systems development, testing, and deployment to substantial strategic nuclear arms reductions and at the same time limiting the US strategic modernization process. Although not new in principle, it has been formally presented at Geneva and represents a new starting point for continued negotiations.

During Round Three, the United States proposed an "open laboratories" initiative, in which both sides would commit to provide, on a regular basis, briefings on each other's strategic defense research efforts and opportunities to visit associated research facilities. This would permit Soviet experts to see first hand that SDI is not intended to serve offensive purposes. American scientists would be allowed to visit comparable facilities of the Soviet strategic defensive program, which has been involved in much more than research for many years. The United States also made it clear to the Soviets that it is committed to pursue the SDI program as permitted by, and in full compliance with, the ABM Treaty.

Mutual and Balanced Force Reductions

The long-standing negotiations on mutual and balanced force reductions (MBFR) between NATO and the Warsaw Pact have the objective of achieving a more stable relationship between East and West and the strengthening of peace and security in Europe through mutual reductions of forces and armaments with undiminished security for both alliances. Draft treaties have been submitted by both sides, but they remain far apart on two fundamental issues — initial force levels and verification of manpower. Eastern intransigence regarding the need for agreement on initial force levels has made it questionable whether reductions would result in parity. In early 1984, the United States and its allies proposed a modification to the 1982 Western draft treaty to break the impasse on initial force levels. This proposal would require data only on combat and combat support forces within an acceptable range of Western estimates prior to treaty signature.

The East's counterproposal, presented in February 1985, called for initial US and Soviet reductions of combat and combat support forces without linkage to follow-on reductions. The problem with the latest Eastern proposal is the absence of provisions to satisfy Western concerns about initial data and verification of residual forces.

Picking up on the East's counterproposal, in December 1985, the West made a concession that offered to delay the data requirement in exchange for Eastern acceptance of an enhanced verification package in a time-limited, phase-one agreement. The West would reduce US ground forces by 5,000 in exchange for a Soviet ground force reduction of 11,500. Because of this lessened initial requirement, the West will press for a strengthened verification package.

Conference on Disarmament in Europe

The Conference on Confidence- and Security-Building Measures and Disarmament in Europe, commonly known as the Conference on Disarmament in Europe (CDE), began in early 1984. The conference was mandated by the Conference on Security and Cooperation in Europe (CSCE), and all 35 CSCE participating states are taking part. The CDE mandate is to develop confidence- and security-building measures (CSBMs) in Europe that will clarify intentions, reduce the chance of miscalculation during crises, and reduce the risk of surprise attack. Proposals have been put forward by NATO, the Soviet Union, and other parties. The NATO proposal has focused on militarily significant and verifiable CSBMs. The Soviet proposal has emphasized politically oriented declaratory measures and more recently, military CSBMs that do not conform to the provisions of the CDE mandate. To date, progress has been slow and primarily procedural, but agreement on a working structure has led to a more detailed review of proposals. The CDE must report back to the next CSCE review conference in Vienna in late 1986.

Other Multilateral Negotiations

Representatives of the Joint Chiefs of Staff participate in other multilateral fora, including the 40-nation Conference on Disarmament (CD). High on the CD agenda are the achievement of a nuclear comprehensive test ban (CTB) and a comprehensive chemical weapons ban. As a result of the suspension of negotiations among the United States, United Kingdom, and Soviet Union on a CTB, some members favor negotiating a comprehensive nuclear test ban within the CD. Such testing, however, remains essential to the maintenance of a credible nuclear deterrent. Therefore, the long-term goal of a CTB must continue to be viewed in the context of broad, deep, and verifiable arms reductions; improved verification capabilities; expanded confidence-building measures; and maintenance of a modern, effective deterrent force.

In 1984, the United States proposed a draft treaty on a total chemical weapons ban in the Conference on Disarmament. Soviet and surrogate violations of the Geneva Protocol of 1925 and the Biological and Toxin Weapons Convention of 1972 justify continued US insistence on effective verification of a total ban of chemical weapons. The Soviets and some other nations consider verification and compliance provisions of the US draft treaty as intrusive and unacceptable. The Soviets hold that verification should be accomplished through national technical means and self-inspection. Given these differences and the fact that an unverifiable ban would seriously endanger US and allied security, the prospects for early achievement of a chemical weapons ban are not good. In the interim period until a verifiable ban can be concluded, the United States must establish and maintain an effective chemical retaliatory capability to deter chemical attack and provide an incentive for the Soviets to negotiate seriously.

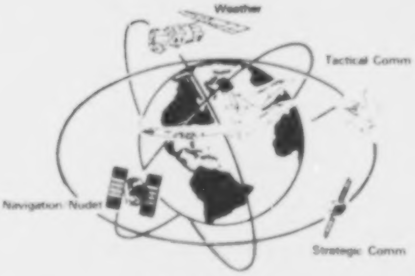
Verification

In each of the negotiating fora, the United States has stressed the critical importance of effective verification as a keystone of any bilateral or multilateral arms control agreement. In view of past and current Soviet violations of arms control agreements, the United States has also stressed that the Soviet Union reverse its current noncompliant behavior and practice full compliance in the future. While effective verification regimes cannot ensure compliance, they can help the United States to better monitor Soviet activities and eliminate potential sources of ambiguity. In this fashion, effective verification regimes can help to ensure that military risks are acceptable. Toward this end, effective verification of numerical limits, qualitative constraints, and limits on the production and storage of nuclear and chemical munitions will require comprehensive cooperative measures for all parties involved. Without an effective verification regime, an arms control agreement will serve only to limit US options and programs without providing assurance that other parties have been similarly constrained.

MILITARY SPACE ACTIVITIES

Recognizing the increasing role of space in supporting national interests, the United States has developed a comprehensive space policy for both civil and military uses. Space-based systems have clearly demonstrated their value in support of the planning and execution of US military operations, thereby contributing to deterrent and defense capabilities. Figure V-2 depicts some of the current military uses of space. The NCA and US military forces depend heavily upon space systems in peacetime, crisis, and conflict.

Military Employment of Space Assets



As of 1 January 1986 *FIGURE V-2*

Operations

Both the United States and the Soviet Union depend on space systems for operational support, the United States more so than the Soviet Union. Continuing technical advances by the Soviets could lead to the development of improved space-based weaponry which would place critical US satellite systems at greater risk. The United States must be able to counter or nullify the effectiveness of enemy space systems and ensure that US space assets can function in a hostile environment. An ASAT system will be key to the development of required US space defense capabilities in the near term.

Operational Support

Operational support activities include communications, terrestrial surveillance, navigation and positioning, meteorology, oceanography, mapping, and search and rescue. Systems now operational or under development to perform these activities include MILSTAR; Fleet, Air Force, Leased, and Defense Satellite Communication Systems, Defense Meteorological Satellite Program, Navy Remote Ocean Sensing System, Global Positioning System, and Nuclear Detonation Detection System.

VANDENBERG SPACE LAUNCH COMPLEX

Space support activities involve operations associated with launching and deploying space vehicles, maintaining and sustaining space vehicles while in orbit, and recovering space vehicles if required. Centers being developed and improved to support such missions include a Consolidated Space Operations Center and ground facilities for the Satellite Control Facility and its associated ground stations. The United States is developing the capability to process information on board spacecraft and then perform the necessary data relay. Systems being developed to deploy satellites include new upper stages and expendable launch vehicles. Systems used or under development to transfer satellites from a low orbit to high orbit include the Inertial Upper Stage, the Payload Assist Module, and the CENTAUR Upper Stage. The United States is also pursuing an assured launch capability by developing a complementary expendable launch vehicle which would serve as a hedge against unforeseen technical and operational problems affecting the Space Transportation System, and provide an alternate means of supporting satellite launches during crisis situations. At Vandenberg Air Force Base the Shuttle Launch Complex was officially dedicated and declared operational in October 1985. Plans are proceeding for the first Vandenberg shuttle mission in March 1986.

Soviet Space Efforts

The Soviets continue their vigorous space efforts. The Soviets still lag behind the United States in many important areas of space technology, but lead in directed energy weapon technology, space medicine, effects of weightlessness, and other human endurance areas. The Soviets' annual space budget growth rate of 15 percent has exceeded their overall military budget growth rate in recent years. Most of their space effort is purely military, and much of the remainder involves joint civil-military programs. The Soviet logistic base (which includes launch pads, mission control sites, and space-support ships) is the largest in the world. The Soviets also have a large inventory of satellites and launch vehicles. This enables the Soviets to place large numbers of satellites in orbit quickly. The Soviets have sustained an average annual launch rate of approximately 100 space systems during the past few years. This indicates a significant production capability. Launch rate differences between the United States and the Soviet Union can be explained partially by the Soviet need to replace satellites more frequently because of the shorter average lifetime of its satellites. However, the Soviet launch rate also provides a very robust launch-and-replace capability in crisis and conflict situations. The Soviets continue to make important technical advances in their satellite programs. Figure V-3 shows a summary of US and Soviet space activity for 1984 and 1985.

US–Soviet Space Activity Summary

	1984	1985
Number of Launches	[redacted]	[redacted]
Satellite Payloads*	[redacted]	[redacted]

* Numbers rounded

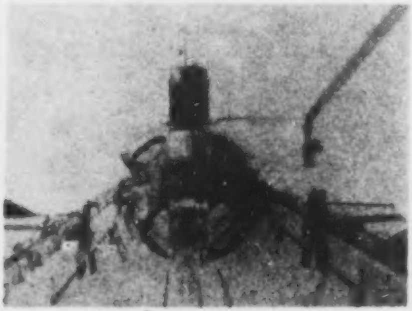
As of 1 January 1986 *FIGURE V-3*

The Soviet Union has maintained its three-to-one margin over the United States in man-days in space. With SALYUT 7 manned for extended periods, the Soviets have already demonstrated the capability to establish a manned space station. Research and development, reconnaissance, operation of weapons and sensors, and other military missions could be performed from such stations. The introduction of a Soviet reusable manned orbital shuttle is expected by the late 1980s. The US Space Transportation System has been operational since 1981.

The Soviets are currently developing two new launch systems. One system will support the manned orbital shuttle and the other may support a manned space plane. The Soviets are also continuing to improve their space-based reconnaissance systems.

Some existing Soviet space assets pose a threat to US satellites and ground forces. The Soviet operational ASAT system is designed to attack low-altitude satellites. Additionally, their ABM and ICBM systems have inherent ASAT capabilities and could augment the coorbital system. Some US satellites may also be vulnerable to interference from jammers or damage from ground-based systems.

Soviet space systems have potential application during crises and situations short of general nuclear war because they provide command authorities with order of battle, warning, target location, and battle damage assessment information.



SPACE SHUTTLE OPERATIONS

US Space Command

The Soviet emphasis on space as a warfighting medium and the increasing US reliance on space systems caused the United States to reevaluate its military command structure supporting space operations. This resulted in the formation of a new unified command.

The establishment of the US Space Command (USSPACECOM) in September 1985 placed DOD space forces into a single, joint military organization. USSPACECOM enhances the deterrent posture of the United States by providing timely support to the NCA and forces assigned to the CINCs through greater control over space systems in peace, crisis, and war. A direct tie to the NCA through USCINCSPACE ensures that space forces are singly led and prepared to fight as one. The new command is charged with operating and protecting space systems and providing integrated tactical warning and assessment of space, missile, and air attacks on CONUS.

SECURITY ASSISTANCE

Security assistance programs contribute to US national security objectives by assisting allies and friends to meet their defense needs and supporting collective security efforts. Security assistance is an essential element of foreign policy and a cost-effective way to build positive government-to-government relations. By sharing costs and effort, many countries can achieve a level of mutual security unattainable independently. By strengthening US allies and friends, security assistance programs also serve as an economy-of-force measure which allows the United States to concentrate its available forces in areas of greatest threat. For these reasons, security assistance is an integral part of US military strategy.

Security Assistance Objectives

The primary military objectives of security assistance are to assist countries in preserving their independence; promote regional security; help obtain base rights, overseas facilities, and transit rights; ensure access to critical raw materials; and provide a means to expand US influence.

Elements of Security Assistance

The major components of military security assistance are the Foreign Military Sales (FMS) Program, the FMS Credit (FMSCR) Program, the Military Assistance Program (MAP), the International Military Education and Training (IMET) Program, the Economic Support Fund (ESF), and Peacekeeping Operations (PKO).

Foreign Military Sales Program

The FMS Program enables eligible governments to purchase defense equipment, services, and training from the United States on a cash basis. In addition to cash sales, FMSCR has been included in the budget and all loans have been made directly by the US Government to recipient countries instead of through commercial banks. For selected countries, a portion of this credit is available as low interest loans. Approximately 84 percent of the proposed DOD FY 1987 military security assistance budget would be allocated to FMSCR.

SECURITY ASSISTANCE TRAINING

The Military Assistance Program

This grant program provides an account for designated countries that may be used to obtain defense equipment and selected services. MAP funds allow certain economically disadvantaged countries to improve their security and ability to contribute to collective defense. The DOD FY 1987 MAP proposal represents about 15 percent of the total proposed budget for security assistance and a sizeable increase over funds appropriated for MAP in FY 1986. This increase is intended to allow the United States to assist certain needy countries by further improving their security and ability to contribute to collective defense.

The International Military Education and Training Program

The IMET program provides training to foreign military and certain foreign government-sponsored civilians on a grant basis. IMET training consists of formal courses, orientation tours, and on-the-job training. This program has greatly expanded US contacts with foreign governments, whose representatives are trained by US personnel. IMET students frequently assume leadership and management roles in their armed forces and elsewhere in their governments.

Over recent years, IMET expenditures represented about 1 percent of the total military security assistance budget. Figure V-4 depicts expenditures and numbers of students who have attended US military-sponsored training under IMET over the past 6 years. Since FY 1984, modernization programs have required that an increased percentage of IMET funds be used to support the training of pilots and similarly skilled technical personnel. This requirement has resulted in a higher average cost per student. This program enhances collective defense at relatively low cost to the United States by providing urgently required training to foreign forces.

Worldwide IMET Expenditures

Students Trained in US

FY	*Expenditures* (in millions)*	*Students Trained*	*Cost Per Student*
80	$24.9	3,545	$6,996
81	28.7	4,836	5,935
82	46.2	6,317	7,314
83	46.0	6,861	6,705
84	52.8	5,967	8,855
85	56.2	5,880	9,557

* Actual dollars/not adjusted for inflation

As of 1 January 1986 *FIGURE V-4*

Economic Support Fund

The ESF provides economic assistance on a grant or loan basis to selected countries having special political and security interest to the United States. This very important program, which is operated and managed by the State Department, is designed to help correct the economic problems of countries by funding and encouraging creation of growth industries. In many instances grievances leading to insurrection and low-intensity conflict can be averted through economic growth.

Peacekeeping Operations

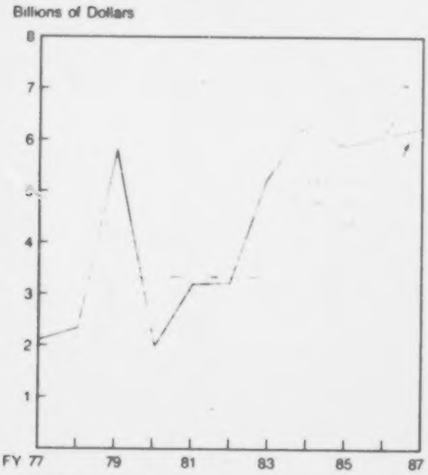
Peacekeeping Operations enable the United States to participate in multinational operations necessary to help prevent international conflicts. PKO were established to provide for that portion of security assistance devoted to programs such as the Multinational Force and Observers and the US contribution to UN Forces Cyprus.

Security Assistance Initiatives

Over the past few years, legislative initiatives have been introduced to increase the effectiveness of the security assistance program. These initiatives were designed to provide more flexibility in planning, production, and delivery of military equipment thus allowing the United States to be more responsive to nations suddenly threatened by overt hostilities, e.g., Chad, Lebanon, and El Salvador. One initiative increased the capitalization level for the Special Defense Acquisition Fund (SDAF), which was established to improve US responsiveness to anticipated FMS needs by allowing advance orders of high-demand items that have long leadtime procurement schedules. This has allowed more timely acquisition of these items.

Security Assistance Budget*

(Current $)

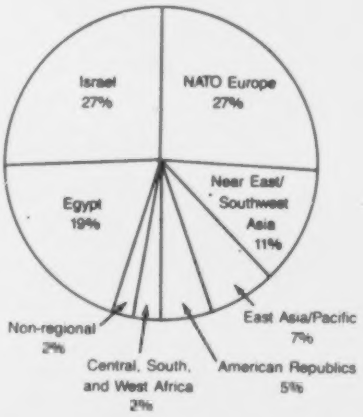


* FMSCR, IMET, and MAP

As of 1 January 1986 *FIGURE V-5*

The proposed FY 1987 security assistance budget has been developed to meet requirements in areas of the Third World where Soviet presence has increased (Figure V-5). As with prior years, the FY 1987 security assistance budget proposal reflects a balanced consideration of the needs of friends, allies, and US objectives (Figure V-6).

FY 1987 Security Assistance Strategic Apportionment*



* Estimated Administration proposal (inlcudes FMSCR, IMET, and MAP)

As of 1 January 1986 *FIGURE V-6*

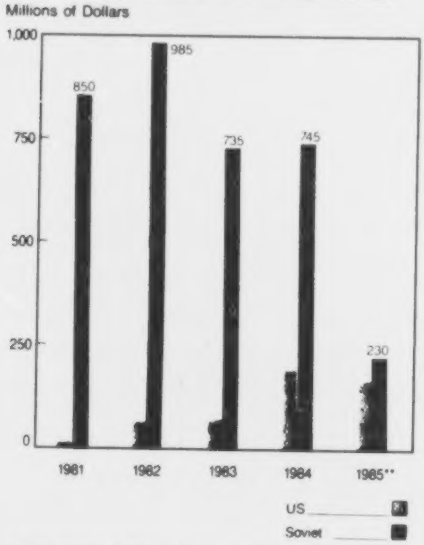
Soviet Security Assistance

Weapon transfers continue to be an increasingly important Soviet means of projecting influence. Over the past 5-1/2 years, Soviet arms sales agreements with the Third World have totaled almost $55 billion. Although Soviet arms agreements are sometimes directed toward disrupting regional stability, recipients have been attracted by favorable financial terms, quick delivery, and, in some cases, advanced weaponry. In recent years, the sale of military equipment has become a more important source of hard currency and commodities for the Soviet Union. In several instances. Soviet weapon transfers have provided a means of acquiring base access rights abroad. Weapon transfers also provide an entree for Soviet advisors into the recipient's military establishment, allowing them to exert influence over local leaders and policies through control of training, maintenance and spare parts, and the sale of newer equipment.

Since 1955, nearly 80,000 military personnel from less-developed countries have been trained in the Soviet Union and Eastern Europe. In 1985, approximately 19,000 Soviet military advisors and technicians were stationed in nearly 30 non-Warsaw Pact countries where they played a central role in organizing, training, and influencing client armed forces.

The Soviet Union provides a significant amount of military aid to countries in Central America and the Caribbean Basin (Figure V-7), as well as Africa (Figure V-8). The Soviets view the Middle East, Northern Africa, and Southwest Asia as regions of great strategic importance and have maintained an especially high level of military assistance in those regions (Figure V-9). These figures compare Soviet military assistance deliveries with US programs.

Military Assistance Deliveries to Countries in Central America and Caribbean Basin*

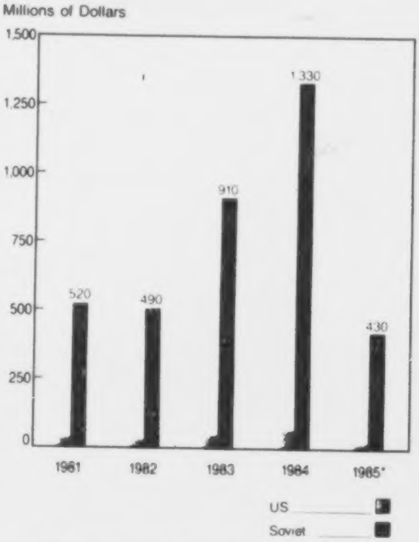


* Does not include Mexico and Venezuela

** Deliveries through 30 September 1985

As of 1 January 1986 **FIGURE V-7**

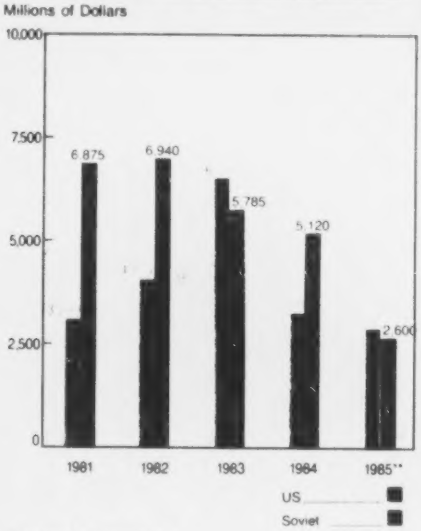
Military Assistance Deliveries to Countries in Central, South and West Africa



* Deliveries through 30 September 1985

As of 1 January 1986 **FIGURE V-8**

Military Assistance Deliveries to Countries in Middle East, North Africa, and Southwest Asia*



* Includes Israel and Egypt

** Deliveries through 30 September 1985

As of 1 January 1986 *FIGURE V–9*

DEFENSE MANPOWER

Overview

The cornerstone of the US military readiness posture of the Total Force is people. In recent years, personnel readiness has improved markedly across all components; however, the number of uniformed personnel needed to maintain US forces at the necessary level of readiness and to field new weapon systems increased only slightly. The challenge that lies ahead is to preserve and improve upon these gains in readiness.

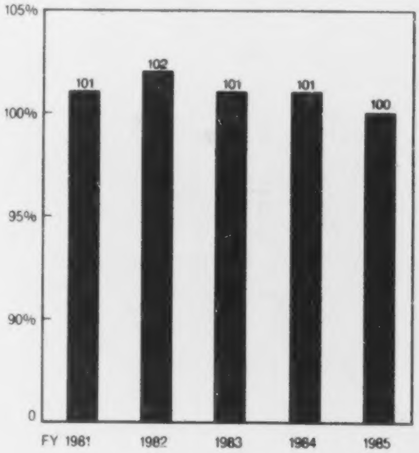
Active Military Manpower

Recruitment

Since FY 1980, the DOD has achieved its overall quantitative (Figure V-10) and qualitative military recruiting requirements. In FY 1985, all Services continued to successfully achieve their accession requirements except for a few high-technology skills that remain difficult to fill. The overall quality of recruits

DOD Recruiting*

(% of Objective Achieved)



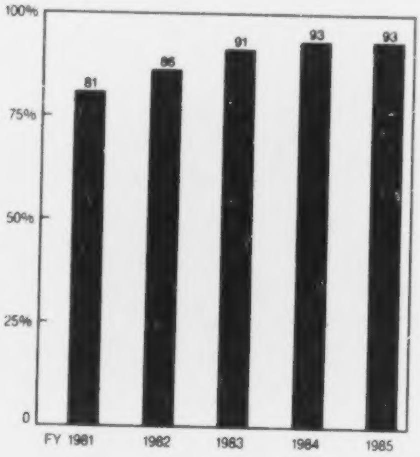
* All Services (prior and non-prior service)

As of 1 January 1986 *FIGURE V–10*

remains high, as shown in Figure V-11. Future recruiting goals, however, will become more difficult to attain unless the relative competitiveness of the enlistment package being offered is preserved.

High School Diploma Graduates*

(All Services)

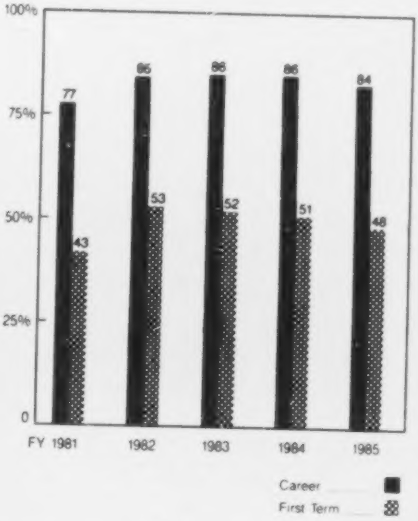


* Non-prior service

As of 1 January 1986 *FIGURE V-11*

DOD Reenlistment Rates

(% of Eligibles)



As of 1 January 1986 *FIGURE V-12*

Retention

The retention of sufficient numbers of high quality, skilled personnel in the right grades is essential to maintaining required military force levels in the active force. Since first-term and career retention have remained high in the 1980s (Figure V-12), the Services have been able to focus on quality by more extensively pursuing policies of reenlistment screening and selective retention. The Services continue to be dependent upon a competitive benefits program, including pay comparability, enhanced quality of life initiatives, and other personnel programs that affect the ability of the Services to meet force requirements in competing with the civilian sector to retain technically skilled people.

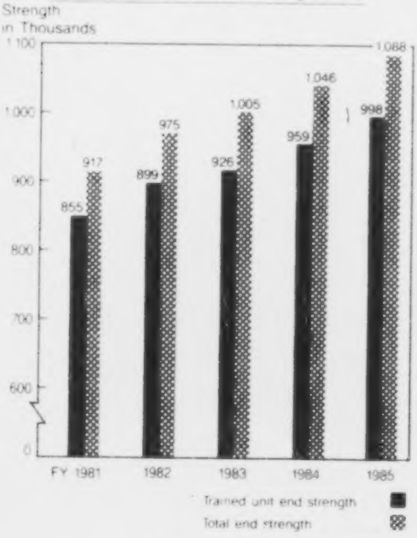
Reserve Manpower

The role of the Reserves in the Total Force has become increasingly important. Properly manned, trained, and equipped reserve units are required to rapidly augment active forces in times of war or national emergency.

The Selected Reserve (SELRES) has the major mobilization mission of the Ready Reserve. The SELRES consists of all of the National Guard forces, all reservists who are organized in Reserve units, and individuals preassigned to augment active units upon mobilization. Like the active forces, the SELRES has experienced significant manning improvements. The decline in SELRES strength that began in FY 1973 was reversed in FY 1979 and has continued to improve through FY 1985 (Figure V-13). Recruiting and retention successes are directly attributable to those manpower management programs and initiatives that have improved the pay, benefits, and quality of life for members of the Selected Reserve. Continued emphasis on programs supporting the personnel readiness of these forces will be required to maintain this positive trend.

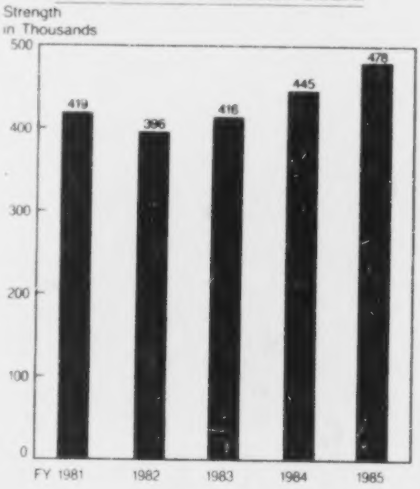
The Individual Ready Reserve (IRR) makes up the remainder of the Ready Reserve. It consists of trained individual reservists who will fill units to wartime manning levels and replace initial wartime casualties. Although no established manning level exists for this important manpower resource, wartime scenarios show that a larger IRR is required. The slow but continuing upward trend in IRR manning, as shown in Figure V-14, has been achieved primarily by increased active and SELRES manning levels along with recently authorized IRR bonus programs. Legislation that extended military service obligations from 6 to 8 years will help to further increase IRR manning in the early 1990s. Continued emphasis, however, will be required to maintain the positive growth, readiness, and responsiveness of the IRR.

Selected Reserve Manpower



As of 1 January 1986 *FIGURE V-13*

Individual Ready Reserve and Inactive National Guard



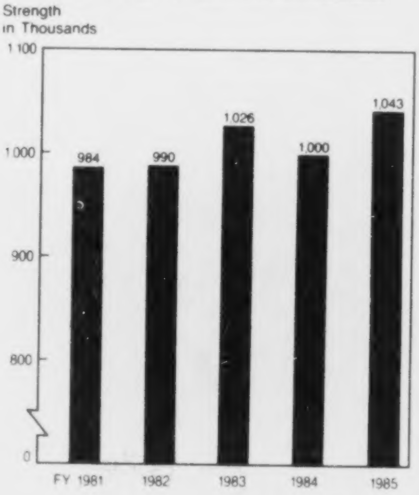
As of 1 January 1986 *FIGURE V-14*

Civilian Manpower

Civilians perform a major role in all defense activities and account for over half of the personnel in support functions within the Department of Defense. Only about 3 percent work in management headquarters, with the remainder in activities such as research and development, base operations, depots, shipyards, logistics and medical care facilities. Congressional action in FY 1985 suspended end strength ceilings in DOD. This has provided an opportunity to manage civilian manpower more effectively based upon funded workload requirements.

Civilian employee strength is expected to be 1,023,000 at the end of FY 1986, a decline from FY 1985 (Figure V-15). Civilian growth between FY 1987 and FY 1990 is expected to be about 5,000. Despite this growth, civilian manpower costs as a percentage of the total DOD budget will continue to decline.

Direct Hire Civilian Employment



As of 1 January 1986 *FIGURE V-15*

Contractor Personnel

An adverse trend with potential long-term consequences has developed as a result of fiscal and military personnel ceiling constraints. Various commands, particularly in the strategic defense mission area, are relying increasingly on contractor personnel to operate and maintain critical military systems such as TW/AA systems.

Quality of Life

Primary in the improvement of personnel readiness in recent years has been the enlistment and retention of quality people. We must ensure that these gains in force quality are protected through strong support for enhanced quality of life programs and a competitive compensation package.

Military pay must regain comparability and then keep pace with the general wage growth in the economy. This could be achieved through use of an automatic pay adjustment mechanism such as the Employment Cost Index. Such a mechanism would provide predictability and economic stability for Service members, thereby encouraging their long-term commitment to careers in the US Armed Forces. In addition, bonuses and special pay will continue to be essential retention incentives for highly skilled personnel and supervisors in the career force. If military pay again lags as it did in the 1970s, a downturn in the recruitment and retention of a quality force is possible.

The military retirement system provides a powerful retention incentive, functions as a force management tool, and supplies a mobilization base of experienced personnel. Changes to the military retirement system must be evaluated carefully, recognizing not only the purposes of the system and the long-term economic impact that change holds for Service members, but also the increased costs of higher accessions, training, and incentive pays and bonuses such changes may generate.

The overall quality of life of Service members and their families has significant influence on force quality and retention. Among the more important quality of life programs are health care, commissaries, adequate reimbursement for permanent change of station moves, and the living and working conditions of our people.

Families of military members play an important role in the quality of life for military personnel and serve as a vital source of strength contributing to US defense readiness. The development of special programs to raise the awareness of the needs of military families has produced results and greatly enhanced the productivity, sustainment, and retention of quality career military members. Continued strong support for these special initiatives is crucial to the well being of military members, 60 percent of whom have family responsibilities. This demonstrated concern will aid immeasurably in the commitment the military receives from its members.

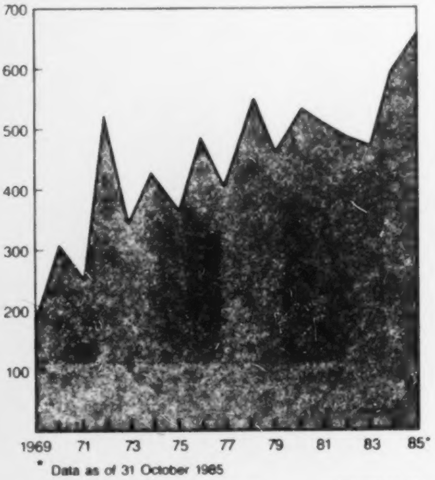
INTERNATIONAL TERRORISM

The threat of international terrorism against the United States and other nations has never been greater and continues to pose formidable challenges. Targeting of US interests in Europe and the Middle East has increased. These areas, along with Latin America, will probably remain the scene of the greatest number of terrorist activities against US interests.

During the past five years about 40 percent of all recorded international terrorist acts have been directed against US interests, with most against official US presence overseas. As shown in Figure V-16, the number of international terrorist incidents occuring in just the first 10 months of 1985 surpassed like annual statistics for all previous years. Note that while high, these figures do not include local acts of violence in which the perpetrators and the victims are indigenous to a single country.

International Terrorist Incidents

1969–1985



* Data as of 31 October 1985

As of 1 January 1986 *FIGURE V-16*

As with the number of terrorist incidents, the average lethality per incident has also increased. The 1983 and 1984 bombings of the US Embassy in Lebanon, 1983 bombing of the Marine headquarters in Lebanon, and bombings of the US Embassy and other facilities in Kuwait illustrate the increased destructiveness of terrorism resulting from relatively simple means and techniques. In addition to the renewed activity of terrorists indigenous to countries in Western Europe, the threat continues from Muslim transnational groups that originate in the Middle East and are influenced by Iran, Libya, and Syria. These groups, as well as fanatical Palestinians, such as those who participated in the October 1985 hijacking of the Italian liner Achille Lauro, pose a significant threat to US interests in the Middle East. Operations by these groups could broaden to include attacks in Europe as well.

Future terrorism will likely be more lethal and may be more frequent. More sophisticated weapons and tactics will likely be employed by terrorists. Power grids, waterways, pipelines, communications systems, mass transportation systems, and centralized computer facilities are particularly vulnerable.

International connections among terrorists continue to increase. In Europe, for example, there is increasing evidence pointing to linkages between terrorist groups in West Germany, France, and Belgium. Coordination among these groups is expected to continue with general targeting directed against US and NATO assets. In Latin America, linkages are also evolving, particularly between Colombian and Ecuadoran terrorists. Insurgents in El Salvador will continue to pose the greatest threat for US personnel and assets in Central America as demonstrated by the brutal assassination of four US Marines in June 1985. However, anti-US threats may also increase in Honduras, Colombia, Ecuador, Peru, and possibly in Chile as well. In Asia, the Philippines may also emerge as a major threat area for US interests.

As in the past, support from the Soviet Union, North Korea, Cuba, Nicaragua, and their allies and the provision of financial aid, weapons, and training from Syria, Iran, Libya, and the People's Democratic Republic of Yemen will likely continue and serves to subvert the security interests of the United States and its allies.

While international terrorism has focused primarily on targets overseas, the continental United States is not exempt from acts of terrorist violence. Some 218 incidents of terrorism occurred within the continental United States and Puerto Rico over the past five years, with over 10 percent directed against US military personnel or property. As self-professed anti-imperialists present the primary terrorist threat, they could pose a significant threat to US Armed Forces should mobilization and deployment become necessary.

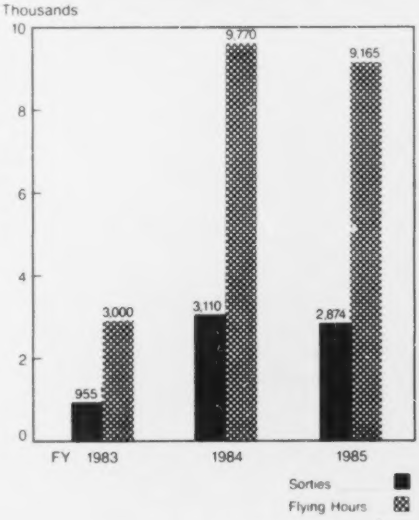
The United States continues to view terrorism as a threat to national security that must be dealt with. During the past year, intelligence collection has been increased against groups and individuals involved in international terrorism to provide timely warning to help deter terrorist acts and contribute to a heightened security posture in order to prevent the execution of such planned acts. This has helped to thwart many terrorist acts. The Services have undertaken efforts to confront the growing terrorist problem, including threat-awareness training and physical security programs. The US Armed Forces also have been working closely with non-DOD and host-nation security forces to ensure maximum protection of US personnel, dependents, and facilities. The CINCs also have taken steps to strengthen joint planning for defense against terrorist actions. The Joint Chiefs of Staff are represented on the Vice Presidential Task Force Working Group analyzing the national posture to deal with the terrorist problem. JCS representation ensures that joint military requirements and capabilities support national objectives addressing the threat of terrorism.

MILITARY SUPPORT TO DRUG INTERDICTION

Drug trafficking threatens US national security in three ways: social, economic, and politico-military. Drugs pose a threat to the United States through the degrading effect they have on the moral, social, and economic well-being of the country. The politico-military dimension of the threat consists of four elements: undermining friendly governments important to US security through corruption, intimidation, and economic destabilization; drug linkages to insurgencies which further threaten to destabilize these governments; the threat of drug-related terrorism to US officials and citizens abroad; and the degradation in military readiness and internal security of the US Armed Forces resulting from illicit drug use.

Since 1981, when the passage of Public Law 97-86 clarified the Posse Commitatus Act, US military forces have actively supported law enforcement agencies to the maximum extent possible consistent with resource availability, national security requirements, and the needs of military preparedness. This has included surveillance missions, communications and intelligence support, towing or escort of seized vessels, transport for logistics, equipment loans, and expert personnel assistance to regional centers and headquarters of the National Narcotics Border Interdiction System. In support of drug interdiction efforts, the numbers of sorties and flying hours flown by US military aircraft in FY 1985 remained close to the high FY 1984 levels and represent about a threefold increase over the numbers of sorties and hours flown in FY 1983. Surveillance mission data for FY 1983 through FY 1985 are displayed in Figure V-17.

Military Aircraft Surveillance Missions in Support of Drug Interdiction



As of 1 January 1986 *FIGURE V-17*

EUROPEAN TROOP STRENGTH

The congressionally-mandated European troop strength (ETS) manpower ceiling continues to affect adversely European force structure, readiness, modernization, and sustainability. The ceiling ignores the increasing capabilities of the Warsaw Pact, discounts improvements made by our allies, creates the impression that the United States is increasing nuclear forces at the expense of conventional forces, and creates a NATO penalty for CONUS defense improvements in the Atlantic islands. Conforming to the existing ETS ceiling restricts US and NATO combat capability as we reach the limits of prudent economizing, civilianizing, and reducing troop strength. As newer, more capable systems are introduced in Europe, the ceiling mandates that needed combat assets be returned to CONUS.

On the other hand, the Warsaw Pact is improving rapidly its conventional force capabilities and the gap between NATO and Pact force capabilities is growing wider despite the increased efforts of the NATO Allies. In the event of a Warsaw Pact attack against NATO, the ceiling's limit on conventional forces has increased the risk and could have the effect of lowering the nuclear threshhold. Continuation of the ceiling undermines the gains made in recent years in countering the threat to NATO. It is imperative that the size and composition of our deployed forces in Europe be based upon the requirement to meet the threat to US and allied interests, and not upon an arbitrary ceiling. There is no ceiling on Soviet forces.

GLOSSARY

AAW — antiair warfare
AAV SLEP — assault amphibian vehicle service life extension program
ABM — antiballistic missile
AC — Active Component
ACM — advanced cruise missile
ADCOM — Aerospace Defense Command
ADDISS — Advanced Deployable Imagery Support System
ADP — automatic data processing
AEGIS — US Navy AAW weapon system
AEW — airborne early warning
AFAP — artillery-fired atomic projectiles
ALCM — air-launched cruise missiles
ALMV — air-launched miniature vehicle
AMRAAM — advanced medium-range air-to-air missile
ANMCC — Alternate National Military Command Center
ANZUS — Australia, New Zealand, United States
ASARS — Advanced Synthetic Aperture Radar System
ASAS — all source analysis system
ASAT — antisatellite
ASEAN — Association of Southeast Asian Nations
ASM — air-to-surface missile
ASROC — antisubmarine rocket
ASW — antisubmarine warfare
ATB — Advanced Technology Bomber
AUTODIN — automatic digital network
AUTOVON — automatic voice network
AVN — aviation
AWACS — Airborne Warning and Control System
BB — battleship
BMD — ballistic missile defense
BMEWS — Ballistic Missile Early Warning System
BSTS — Boost Surveillance and Tracking System
C^3 — command, control, and communications
C^3CM — command, control, and communications countermeasures
C^3I — command, control, communications, and intelligence
CD — Conference on Disarmament
CDE — Conference on Disarmament in Europe
CG — guided missile cruiser
CGS — CONUS Ground Station
CINCs — commanders in chief of the unified and specified commands
CINCLANTFLT — Commander in Chief Atlantic Fleet
CINCUSNAVEUR — Commander in Chief US Naval Forces Europe
COBRA DANE — space surveillance sensor
CONUS — continental United States
CRAF — Civil Reserve Air Fleet
CRAFTS — Civil Reserve Auxiliary Fleet Ships
CSBM — confidence- and security-building measures
CSCE — Conference on Security and Cooperation in Europe
CTB — comprehensive test ban
CVN — nuclear-powered aircraft carrier
CVW — carrier air wing

CW — chemical warfare
CY — calendar year
DA — direct action
DCA — dual-capable aircraft
DCS — Defense Communications System
DD — destroyer
DDC — Data Distribution Center
DDG — guided-missile destroyer
DDN — Defense Data Network
DEW — Distant Early Warning
DOD — Department of Defense
DSCS — Defense Satellite Communication Systems
DSN — Defense Switched Network
DSP — Defense Support Program
DWT — division wing team
ECM — electronic countermeasures
EHF — extremely high frequency
ELF — extremely low frequency
EPDS — electronic processing dissemination system
ESF — Economic Support Fund
ETS — European Troop Strength
EW — electronic warfare
FID — foreign internal defense
FLTSATCOM — Fleet Satellite Communications System
FMS — Foreign Military Sales
FMSCR — Foreign Military Sales Credit
FRG — Federal Republic of Germany
FY — fiscal year
GLCM — ground-launched cruise missile
GNP — gross national product
HNS — host-nation support
HQ — headquarters
HTKP — hard-target kill potential
HUMINT — human intelligence
IASA — Integrated AUTODIN System Architecture
ICBM — intercontinental ballistic missile
IFF — identification friend or foe
IMET — International Military Education and Training
INF — intermediate-range nuclear forces
IOC — initial operational capability
IRR — Individual Ready Reserve
I-S/A AMPE — interservice/agency automated message processing exchange
JCS — Joint Chiefs of Staff
JDS — Joint Deployment System
JFDP — Joint Force Development Process
JINTACCS — Joint Interoperability of Tactical Command and Control Systems
JOPES — Joint Operation Planning and Execution System
JRMB — Joint Requirements and Management Board
JSOA — Joint Special Operations Agency
JSTARS — Joint Surveillance and Target Attack Radar System
JTACMS — Joint Tactical Cruise Missiles
JTIDS — Joint Tactical Information Distribution System
JTTP — joint tactics, techniques, and procedures

km	— kilometers
LANTIRN	— low-altitude night targeting infra-red navigation
LAV	— light armored vehicle
LCAC	— landing craft, air-cushion
LCU	— landing craft, utility
LOC(s)	— line(s) of communication
LOTS	— logistics over the shore
LRINF	— longer range intermediate-range nuclear forces
LSVs	— logistics support vessels
M-day	— Mobilization-day
MAB	— Marine Amphibious Brigade
MAC	— Military Airlift Command
MAF	— Marine Amphibious Force
MAGTF	— Marine air-ground task force
MAP	— Military Assistance Program
MAU/SOC	— Marine amphibious unit special operations capability
MBFR	— mutual and balanced force reductions
MCM	— mine countermeasures
MILCON	— military construction
MILSTAR	— Military Strategic Tactical Relay
MIRV	— multiple, independently targetable reentry vehicle
MLRS	— Multiple-Launch Rocket System
mm	— millimeter
MPF	— multipurpose facility
MPS	— Maritime Pre-positioning Ship
MRBM	— medium range ballistic missile
MSE	— mobile subscriber equipment
MTM/D	— million-ton-miles per day
NATO	— North Atlantic Treaty Organization
NAVSPECWAR	— Navy special warfare
NBC	— nuclear, biological, and chemical
NCA	— National Command Authorities
NCMC	— NORAD Cheyenne Mountain Complex
NDRF	— National Defense Reserve Fleet
NEACP	— National Emergency Airborne Command Post
NIS	— NATO identification system
nm	— nautical mile
NMCC	— National Military Command Center
NMCS	— National Military Command System
NNBIS	— National Narcotics Border Interdiction System
NORAD	— North American Aerospace Defense Command
NSNF	— nonstrategic nuclear forces
NST	— Nuclear and Space Talks
NTPF	— near-term pre-positioning force
NWS	— North Warning System
OJCS	— Organization of the Joint Chiefs of Staff
OPDS	— Offshore POL Discharge System
OTH-B	— over-the-horizon backscatter
PACAF	— Pacific Air Force
PARCS	— Perimeter Acquisition Radar Attack Characterization System
PAVE PAWS	— phased-array missile warning system
PGM	— precision guided missile
PJH	— PLRS-JTIDS hybreed
PKO	— Peacekeeping Operations

PLRS	Position Location Reporting System
PLSS	Precision Location Strike System
POL	petroleum, oils, and lubricants
POM	Program Objective Memorandum
POMCUS	pre-positioning of materiel configured to unit sets
PPBS	Planning, Programming, and Budgeting System
PRC	People's Republic of China
PREPO	pre-positioning
psi	pounds per square inch
PSYOP	psychological operations
PWRM	pre-positioned war reserve materiel
R&D	research and development
RC	Reserve Component(s)
RCS	radar cross-section
RECCE	reconnaissance
RECON	reconnaissance
REFORGER	Return of Forces to Germany
ROK	Republic of Korea
RO/RO	roll-on/roll-off
ROS	reduced operating status
RPV	remotely piloted vehicle
RRF	Ready Reserve Force
RSI	rationalization, standardization, and interoperability
RV	reentry vehicle
SAC	Strategic Air Command
SACEUR	Supreme Allied Commander Europe
SAM	surface-to-air missile
SATCOM	satellite communication
SCP	Secure Conferencing Project
SDAF	Special Defense Acquisition Fund
SDI	Strategic Defense Initiative
SEAL	Sea, Air, and Land
SELRES	Selected Reserve
SICBM	small intercontinental ballistic missile
SIGINT	signals intelligence
SINCGARS	single-channel ground-airborne radio system
SIOP	Single Integrated Operational Plan
SLBM	submarine-launched ballistic missile
SLCM	sea-launched cruise missile
SLEP	Service Life Extension Program
SLOC(s)	sea line(s) of communication
SNA	Soviet Naval Aviation
SNF	short-range nuclear forces
SO	special operations
SOF	special operations forces
SOSUS	Sound Underwater Surveillance System
SPRAA	Strategic Plans and Resource Analysis Agency
SPS	simplified processing station
SRBM	short-range ballistic missile
SRINF	shorter-range intermediate-range nuclear forces
SRT(s)	strategic relocatable targets
SSBN	nuclear-powered ballistic missile submarine

SSGN — guided missile submarines
SSM — surface-to-surface missile
SSN — nuclear-powered attack submarine
SSTS — Space Surveillance and Tracking System
START — Strategic Arms Reduction Talks
SUBROC — submarine launched rocket
SURTASS — surface towed array sonar system
SVIP — Secure Voice Improvement Program
TACIES — tactical imagery exploitation system
TACMS — tactical missile system
TACS — tactical air control system
TAH — hospital ship
TARPS — tactical air reconnaissance pod system
TEL — transporter-erector launcher
TAVB — aviation logistics support ship
TFW — tactical fighter wing
TLAM/N — TOMAHAWK Land-Attack Cruise Missile (Nuclear)
TOW — tube-launched, optically tracked, wire-guided missile
TW/AA — tactical warning and attack assessment
USCENTCOM — United States Central Command
USCINCCENT — Commander in Chief, US Central Command
USCINCEUR — US Commander in Chief, Europe
USCINCLANT — Commander in Chief, US Atlantic Command
USCINCRED — Commander in Chief, US Readiness Command
USCINCSPACE — Commander in Chief, US Space Command
USSPACECOM — US Space Command
USEUCOM — US European Command
USLANTCOM — US Atlantic Command
USPACOM — US Pacific Command
UW — unconventional warfare
VAR — cargo variant
VLS — Vertical Launch System
VSTOL — vertical/short takeoff and landing
WHNS — wartime host-nation support
WIS — WWMCCS Information System
WRSA — war reserve stock for allies
WWABNRES — WWMCCS Airborne Resources
WWDSA — Worldwide Digital System Architecture
WWMCCS — Worldwide Military Command and Control System

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